The OIL WEEKLY

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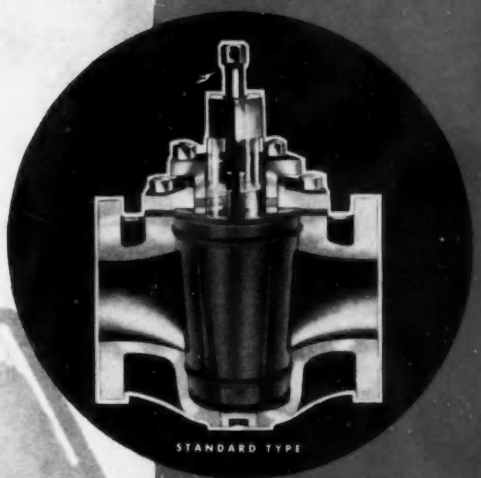

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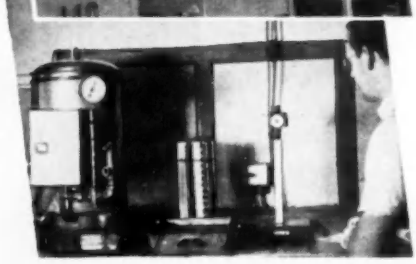

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PETROLEUM REFINER and The REFINERY CATALOG for the refining-natural gasoline industry

LOOKING AHEAD
... with the Editor

FORTHCOMING is an article entitled "Condensates May Occupy An Apparent Negative Volume in a Gas Reservoir."

This article will bring out in several ways the fact that removal of condensates from natural gas may not necessarily cause the resulting dry gas to shrink in volume, but under some unique conditions could cause the dry gas to occupy a large volume than the wet gas occupied at the original pressure and temperature.

This discussion should be of special interest to the production branch of the industry at this time.

The authors of this article are Dr. D. L. Katz and Cedomir M. Sliepcevich of the University of Michigan.

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THE OIL WEEKLY

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Published by THE GULF PUBLISHING COMPANY, Houston, Texas

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Published Every Monday. Single Copies 15 cents (Except Special Issues). Subscription price: domestic and foreign, $2.00 a year; 2 years, $3.00. Advertising rates on application.
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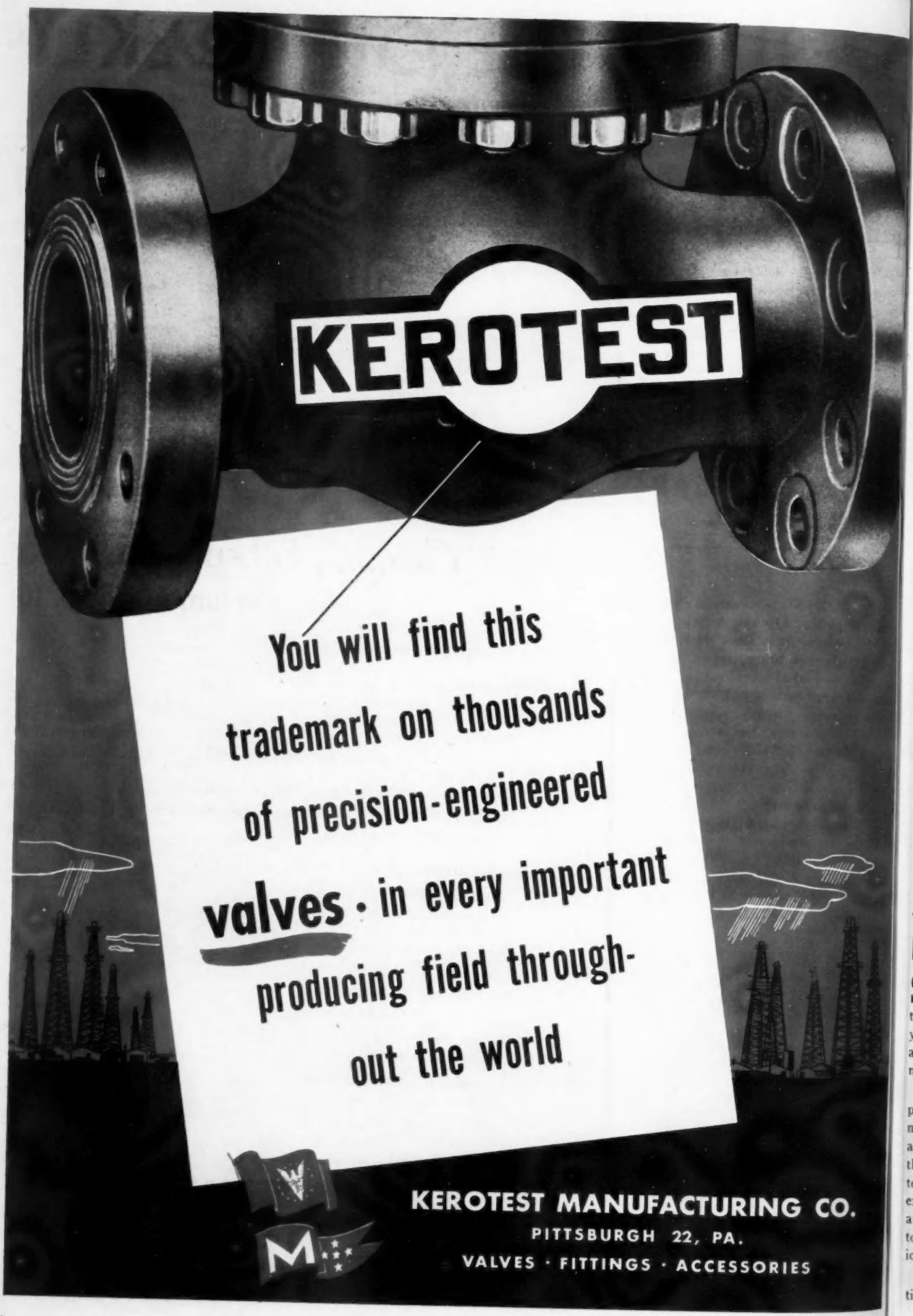
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The Changing Panorama

Second Quarter Pipe Topmost Subject

FEAR that the oil industry will not be allocated enough tubular goods for the second quarter of 1945 by the WPB had priority in the conversations of oil men during the past week. While no allocation has as yet been made by WPB, advance notice was given PAW some time ago that it appeared the military demand for the second quarter would be such as to mean the oil industry would get, domestically, only about 142,000 tons of tubular goods, instead of the 287,000 needed to drill the 6900 wells projected for that quarter by PAW. (It was calculated by PAW officials in Washington that 142,000 tons would drill only 3400 wells.)

At the present moment the WPB allocation has not been made for the second quarter, and will not be made for a week or ten days—if then. PAW has been pressing for more tubular goods, on the basis that it is vitally necessary to drill more wells during that quarter than can possibly be drilled with 142,000 tons.

While PAW officials refuse to forecast the outcome of present negotiations, they indicate there is hope that the allocation may be worked out to a point fairly close to estimated requirements, in recognition by WPB of the definite need for tubular goods to put over the PAW drilling program.

Synthetic Rubber Marching On

SUCCESSFUL chlorination of synthetic rubber is announced by the Goodyear Research Laboratory, Akron, Ohio, as marking another forward step in the nation's synthetic rubber program.

The specific need is for ship-bottom paint, anti-fouling paint, and non-inflammable paint. Paint made from chlorinated rubber answers the demand for all these. Paints thus formed are resistant to both acids and alkalis and possess excellent anti-corrosion qualities. They are non-inflammable. When subjected to heat, they char and disintegrate chemically, but do not burst into flames.

It is said that this may replace entirely chlorinated natural rubber.

It has been suggested that if and when Elliott Roosevelt gets the commission of brigadier general, to which his father has nominated him, some change be made in the insignia of the rank to differentiate him from the ordinary general. How about golden dogs on his shoulders instead of stars?

Applying Free Trade Idea to Oil and Gas

THE stand of the governor of Mississippi that no oil should be sent out of the state to be refined is absurd, but no more absurd that the position taken by some people in Texas that no natural gas produced in the Lone Star State may ever leave its boundaries. It would be fine, of course, if every barrel of oil produced in Mississippi could be refined there, fine from the standpoint of Mississippi, just as it would be fine if all the cotton raised in Mississippi could be woven into cloth there—and even consumed there. But other things than the desire of a governor are involved. The free trade in commodities between states is essential to the welfare of all states, and fortunately is guaranteed by the document which is supposed to be inviolate. If Mississippi becomes a great oil producing state, it is highly probable that the refining capacity of Mississippi will grow materially—unless taxation or laws make Mississippi a dubious state in which to do business. The governor there actually is not helping Mississippi, he is hurting it by his attitude.

For Ex-Service Men

SO WELL has John A. Roebling's Sons Company, Trenton, New Jersey, tackled the problem of helping the returning veteran adjust himself to his old job or fit into a new one, that the effort deserves special mention.

A booklet called "You and the Ex-Service Man" has been sent to all foremen in the Roebling company. This publication outlines the procedure suggested in welcoming back the soldier. It also serves as a guide to the foreman so that he will not be unadvised in his part of the job of putting ex-servicemen back into congenial work.

It is pointed out to the foreman that "this is no temporary thing, no gesture," but a job that must be carried through to the finish. "Do your best," the foremen are told, "do it so well that others everywhere will copy your methods."

Oil's Part in The Wintry Crisis

ALONG with other industries, oil suddenly and unexpectedly now is confronted with the prospect of a most critical wartime transportation problem. If the acute Atlantic Seaboard transportation snarl is not to have a damaging effect until the very end of the European war, all previous herculean efforts to ship materials to this area must be exceeded. Involved is not only the civilian comfort of the New England area, but also the nation's output of military goods and their delivery to the fighting forces at the front.

Two influences combined to create the present critical condition. First, all shipping facilities, including rail, barge, boat and pipe line, already were being taxed to their utmost capacity because military requirements currently are at their highest level. Then the worst weather conditions in more than a decade struck. Unusual cold, heavy snow and fog, tied up rail, barge and boat movements, causing serious congestion and disruption of shipments. These factors made it necessary to invoke a 72-hour rail shipping embargo against practically all but military goods, to restrict coal and fuel oil use, to order a "brown-out" on use of electricity, to call soldiers out to help remove snow, and other drastic measures.

The situation was so serious that some steel mills and war plants actually curtailed operations because of lack of coal or fuel oil. Meanwhile, East Coast stocks of coal and fuel oil dwindled sharply, and henceforth Eastern supplies will be a very "tender" spot in the picture.

The seriousness of the situation results from the difficulty of recovering lost ground when operations previously were at rates that taxed capacities and abilities. Under such conditions, steel that was not made today cannot be made tomorrow, and so it is with bombs, etc. For the same reasons, it is going to be difficult to replenish depleted East Coast stocks of oil, badly needed for the operation of many war plants and the essential comfort of civilians.

The industry's contribution will be to put every possible barrel of crude oil and petroleum products into the Eastern area, not only so there will be no interference with fighting activities, but so deplen-

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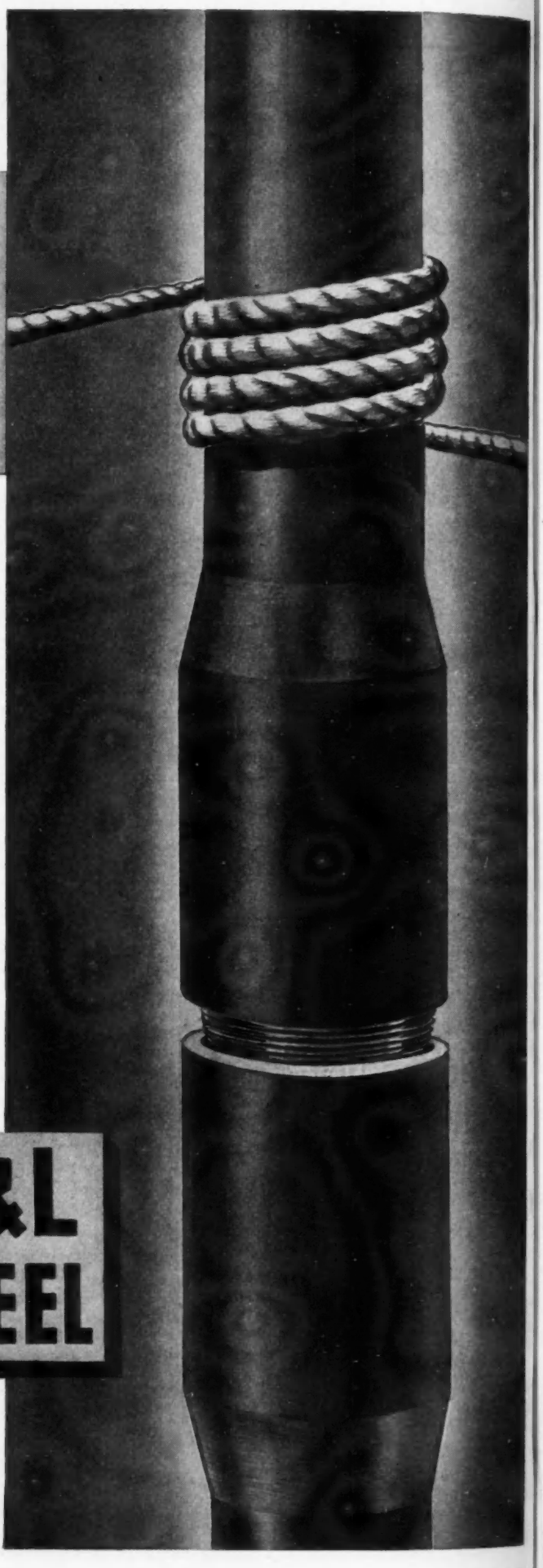

J&L Integral-Joint Drill Pipe is formed completely from single, solid billets of special Blue Ribbon Alloy Steel. It is the only drill pipe of its kind with tool-joint ends die-forged from the pipe itself.

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ished stocks will not retard war plant production or create undue hardships for civilians. Each oil man should do his part, so that the overall results will be sufficient to meet the situation. This means producing, transporting and refining all that he is expected to, and to cooperate in moves that will improve movement of petroleum by rail, barge, pipe line or boat. Some will be asked to assume larger burdens. Others will be asked to give up crude or donate facilities. Hearty response is essential.

Pipe Lines Deliver When Going Is Rough

IN CONNECTION with the current acute situation in the Atlantic Seaboard area, it is of interest to note that the war emergency revamped and enlarged petroleum pipe line system is paying off as never before. With deliveries by tankers, barges and railroad severely handicapped by severe snow and fog, pipe lines have had to assume a larger share of the burden of moving petroleum products to the East than heretofore.

In an effort to meet the situation, pipe line deliveries to the East have been at an all-time high in recent weeks. In one week an average of 740,000 barrels per day, or 9000 barrels above what it had been thought it was possible to move, were delivered by pipe lines. The performance of the 20-inch product line from Texas to the East Coast has been especially noteworthy. This 200,000-barrel per day capacity line has been moving 220,000 barrels daily, due in part, it is true, to the fact that it has been handling only gasoline instead of gasoline and fuel oil.

Tanker Use to Jump When War Shifts

GERMANY is tottering. The rapidity of the Russian sweep indicates the Nazis are on their last legs. The end could come at any time, or might be another three to six months away. The point is that war in Europe obviously is approaching an end.

What influence will termination of war in Europe have on oil? This question is foremost in the minds of many. General opinion is that use of petroleum products will continue at high levels. There may be a short temporary sharp lull, but as soon as possible stockpiling of oils in the Pacific will be commenced. This will come before actual consumption in the Pacific hits its high level. Others foresee some decline in total consumption of petroleum products. This thought is based on there being one war instead of two, although there is full agreement that Pacific requirements will be much greater than in the past. But in view of decreasing productive capacity and the current heavy strain on producing wells, it is felt some cut in consumption would be actually welcomed.

Oil will face new problems, however, when Germany quits. Foremost will be the matter of transportation. Heretofore, all efforts have been toward providing facilities to move oil to the Atlantic Seaboard. When the European war stops, the heavy consuming region will shift to the Pacific Coast, and improvement of facilities for moving oil there must be effected. It is now almost too late to construct a pipe line from Texas to California. Railroads cannot carry as large loads as they have to the East, due to insufficient trackage. Therefore, it appears at this time that tankers will lift much oil from Texas ports. Even this may mean considerable shifting of pipe line movement. Some lines reversed so they could carry oil north from the Texas coast may be reversed again, so more oil can move south to the Texas coast.

Here's What One Former Oilfield Worker Is Fighting For

IF ANYBODY doubts that the American soldier gets down to bedrock in his thinking about affairs back home, he has another thought coming. He does think, and think hard. Fortunately perhaps, the GI doesn't have too much time on his hands in which to turn over in his mind what is taking place, especially after he has gone overseas. He is pretty much busied with the job of the moment. Occasionally however, his thoughts do turn homeward, maybe when he is hiding in a foxhole. All in all, the GI's experiences are clearing his mind of rubbish which still clutters up the heads of some who are fighting the war in civilian clothes here in these United States. Put into words, the GI's thoughts frequently can be a lesson to those Americans who are taking the war so easily and who haven't yet any idea of what it is about.

From a private first class (an ex-oil well cementer, roughneck, and roustabout) with the Fleet Marine Force in the Pacific, comes these sobering words:

"To find out what the average ex-oilman in the armed forces wants after the war, I have talked to men in the Marine Corps, Sea Bees, Army and Navy, and the average man has the same opinion. What we want is the very same thing we had when we left South Texas. To work without being forced into any organization where one has to pay for the privilege of working, or belong to any specific political party. In other words, to work an eight-hour or twelve-hour day, whatever the case may be, and pursue our other interests after the working day is through. That isn't asking very much, and that is truly our American way of life.

"My last employer was Humble Company, and there an employe was treated as an equal to the highest-ranking official. There has been no need for high pressure organizations in the oil industry. We want and demand the same situation after the war."

Although this soldier speaks as an ex-oil man and applies his thinking to the oil industry, isn't his formula basic to all industry? Hasn't he summed up just about all there is in the four freedoms? And hasn't our nation reached its present stature through just the system he asks for? We think so.

Helping the Tanker And Its War Burden

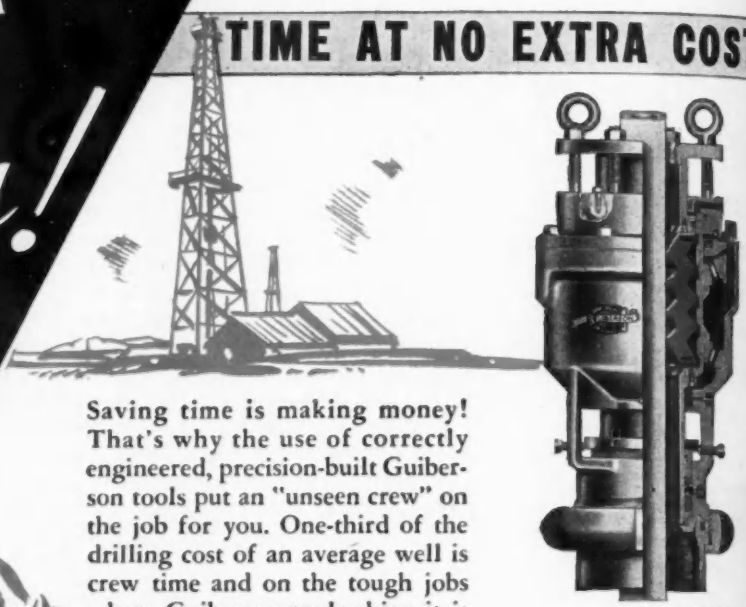
AMERICAN ingenuity has practically turned dry cargo ships into tankers by devising a way of making them exceedingly useful in carrying oil.

Nearly every merchant ship leaving our shores today carries an excess supply of fuel. Bunkers and double bottoms are loaded to capacity. Before starting their return voyages, all fuel in excess of their trip requirements is discharged at a fueling depot or is transferred to other ships. Thus transportation of oil in double bottoms and fuel bunkers has become an increasingly valuable method of helping to fuel our greatly expanded merchant marine.

The plan of excess loading has enabled us to send more than 1,250,000 long tons of fuel to England in two years, thereby releasing 128 tankers of 10,000 deadweight tons for other service. The total is expected to increase this year, therby further releasing tankers.

AN UNSEEN CREW ON THE JOB FOR *You!*

GUIBERSON DRILL-ING HEADS CUT COM-PLETION AND CLEAN-OUT TIME AT NO EXTRA COST



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Saving time is making money! That's why the use of correctly engineered, precision-built Guiberson tools put an "unseen crew" on the job for you. One-third of the drilling cost of an average well is crew time and on the tough jobs where Guiberson tools shine it is far more than that. The Guiberson Type E-1 rotating drilling head is ideal for cleaning out wells after shooting. Helps make better wells in one-tenth of the time. Head provides extra safety for crew and protection against blow-outs. In drilling deep, high-pressure wells tool enables operator to use much lighter drilling fluid. Bottom hole pressures are controlled at the surface. The special rubber packing provides positive seal around any shape. Easy and simple to operate, the Type E-1 is a proud member of the Guiberson unseen crew.

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TYPE G DRILLING HEAD

Small and efficient compact unit. Designed primarily for tubing, this head is suitable for drill pipes including 3½" flush joint. Built for working pressures up to 1500 lbs.

TYPE "H"

TYPE H DRILLING HEAD

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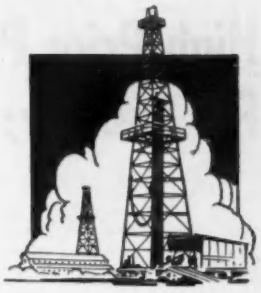

By BERTRAM F. LINZ, Washington Correspondent

POSTWAR use of the government-owned pipe lines as oil carriers was seen last week by economists of the Interstate Commerce Commission as depending upon the price which the government would place on them and the willingness of oil companies to abandon their individually-owned tanker services for the joint action required in pipe-line operations.

Pipe Lines vs Tankers—In a comprehensive study of the matter, the ICC experts saw little chance of the Big Inch line cutting in on the tanker movement, despite slightly lower transportation costs, and no chance whatever for the Little Big Inch.

Income Tax Ruling—There were a number of other developments during the week, including a Supreme Court decision holding that when a lease is sold with a reservation of royalty, the seller need not look to depletion to recover the cost of the equipment on the lease but may make an outright sale of it and charge the unrecovered cost against the proceeds.

Study Refinery Costs—OPA prepared to launch its investigation of refinery costs by which it seeks to determine whether the refiners can absorb any general increase in crude prices which may eventuate from the study of production costs which it initiated last month, and a committee of representative refiners was called to meet in Washington February 20.

Gasoline Supply—China will require 100,000,000 gallons of gasoline in the first year of its postwar recovery, most of it probably to come from the United States, but the Office of War Information warned domestic motorists that no increase in gasoline rations at all can be expected before the end of the European war and an increase then is contingent on many now uncalculable factors.

Refineries' Ability to Absorb Price Increase Theme of February 20 Meet

Plans for the study of refinery costs which is to be made concurrently with the survey of crude production costs were disclosed last week by the Office of Price Administration, which called representatives of 22 refineries to meet in Washington February 20 to discuss the program.

The purpose of the meeting will be to develop a questionnaire designed to show the operating costs of the refining branch to determine its ability to absorb any general price increase that may be made to producers as a result of that study, initiated last month with a four-day meeting of the industry committee.

Membership of the National Refiners Industry Advisory Committee which has been appointed will include: W. S. Zehrung, president, Pennzoil Company, Oil City, Pennsylvania, chairman; W. H. Bennett, vice president-treasurer, Frontier Fuel Oil Corporation, Buffalo, New York; Paul G. Blazer, president, Ashland Oil and Refining Company, Ashland, Kentucky; Max H. Fisher, vice president, Aurora Gasoline Company, Detroit; C. L. Henderson, president, Vickers Petroleum Company, Inc., Wichita, Kansas; John W. Boatwright, manager, sales research department, Standard Oil Company (Indiana), Chicago; D. P. Hamilton, president, Root Petroleum Company, Shreveport, Louisiana; Roland V. Rodman, vice president, Bay Petroleum Corporation, Denver; C. A. Johnson, chairman, Socal Oil and Refining Company, Huntington Beach, California; W. H. Beekhuis, assistant comptroller, Standard Oil Company of California, San Francisco; L. T. Cramer, manager, sales administration, Continental Oil Company, Ponca City, Oklahoma; Sidney A. Swensrud, vice president, Standard Oil Company (Ohio), Cleveland; B. L. Majewski, vice president, Deep Rock Oil Corporation, Tulsa; Neil Buckley, vice president, Taylor Refining Company, Taylor, Texas; R. L. Tollett, president, Cosden Petroleum Corporation, Big Spring, Texas; Dr. Stewart P. Coleman, head, economics department, Standard Oil Company of New Jersey, New York; Horace G. Dale, manufacturing department, Shell Oil Company, Inc., New York; C. F. Salzer, assistant to general auditor, Gulf Oil Corporation-Gulf Refining Company, Pittsburgh; William L. Stewart, Jr., executive vice president, Union Oil Company, Los Angeles; J. S. Worden, manager of refining operations, The Texas Company, New York; M. E. Foster, Phillips Petroleum Company, Bartlesville, Oklahoma; Harry H. Fuller, manager of bulk sales, Sinclair Refining Company, New York.

Anti-Trust Provision in Oil Pact Giving Trouble

Although Deputy Administrator Davies visited the Capitol last week at the invitation of Senator Tom Connally of Texas, chairman of the foreign relations committee, to make an informal report on the progress of the revised Anglo-American petroleum agreement, there are indications of a sharp difference of opinion between the President's committee, the State Department and the Department of Justice which may delay the matter for a time.

The disagreement centers around the industry's demand for protection against anti-trust prosecutions for any concerted action which it may take under the treaty. The cabinet committee has accepted the thesis that the industry should not be exposed to the danger of prosecution by one branch of the government for doing something asked by another branch, but State Department officials are represented as reluctant to see any such provision incorporated in an agreement. The Department of Justice, meanwhile, is offering no encouragement to proponents of the provision, and has not indicated whether it would be willing to accept it.

The matter has been one of the State Department's consideration ever since the meeting of the cabinet committee last month, when it was reported that virtually all questions had been ironed out, and there is no indication that the committee will convene again in the very near future.

Surcharges on Petroleum Ocean Shipments Reduced

Surcharges on bulk shipments of petroleum and products in practically all trades except trans-ocean were slashed last week by the War Shipping Administration, in recognition of the reduced threat of enemy submarines.

On the whole, it was said, surcharges were reduced about 50 percent, with substantial cuts in the Caribbean and Atlantic Coast of Canada rates and minor reductions in the West Coast of Canada and Central America surcharges.

High Price Production Pools Listed For Subsidy; Some Ceilings Increased

First grants of relief to producers in pools where average production costs are above the existing ceiling prices were announced by the Office of Price Administration January 1, effective as of January 1.

The top subsidy of 35 cents a barrel was granted to producers in the Hillsdale Pool, Oklahoma, while those in the Getty Pool, New Mexico, were given 14 cents a barrel; Grayson Pool, Texas, 13 cents a barrel, and Clabberhill Pool, Texas, 12 cents a barrel.

As in the case of the stripper well subsidy, the premiums will be paid by the first purchasers of the oil, who will be reimbursed by Defense Supplies Corporation.

OPA also announced a number of additions and changes in stripper well premiums, effective February 1, the additions being as follows:

Arkansas: Urbana (Nacatoch), Union County, 35 cents per barrel.

Kentucky: Clay, Webster County, 20 cents.

Oklahoma: Ball, Payne County, 35 cents; Cement West (Noble-Oleson), Caddo, 25 cents; Gray (Calvin), Pottawatomie, 20 cents; Nelagony, Osage, 25 cents; Seminole Northeast, Seminole, 25 cents; St. Louis North, Pottawatomie, 25 cents; Tyrola, Seminole, 20 cents; Tyrola East, Seminole, 25 cents.

Texas: Kimbro, Travis County, 35 cents.

An adjustment in the premium granted the Emperor (Deep) pool, Winkler County, Texas, on the basis of average daily production, will raise the rate from 20 to 25 cents, retroactive to January 1.

Changes in ceiling prices were granted in three areas, one the Seal Beach field, Los Angeles County, California, which formerly had a ceiling price of $1.19 per barrel on the basis of production between 23 and 29 gravity only, but which now produces oil above the 29 gravity. The new ceilings will range from $1.23 to $1.29 per barrel. The field produces approximately 8400 barrels daily.

A second change concerns the Elk Hills field, California, which is divided into two zones, a shallow zone retaining the ceilings heretofore applicable to the whole field, and the Stevens Zone which is given ceilings ranging from $1.09 to $1.25 per barrel, a reduction of three to 19 cents a barrel from the previous ceilings. The Stevens Zone produces approximately 450 barrels daily.

The third change provides for an increase of 13 cents a barrel in the ceiling prices for the Sand Hills (Ordovician) pool, Crane County, Texas, to a range of from 93 cents to $1.25 a barrel. The pool is producing approximately 2360 barrels daily.

All three changes were made effective February 1.

West Edmond Production High in Lube Content

The West Edmond pool of Central Oklahoma with the highest daily production of any oil field in the state, is producing crude that is high in lube and 91-octane gasoline base stocks, according to a report by the U. S. Bureau of Mines. The oil is being produced from the Bois d'Arc section of the Hunton lime.

Analyses of Hunton and Bartlesville sand crudes by the Hempel method disclose great similarity, both yielding 31-33 percent gasoline, 10-11 percent kerosene, 15-16 percent gas oil, 19-21 percent lube distillate and 21 percent residuum. Under certain distillation processes about 6 percent of the West Edmond crude can be utilized for the high-octane base.

California Standard Oil Tanker Is Sunk by Enemy

Loss of the 12,700 deadweight ton Standard Oil Company of California tanker H. D. Collier, with the loss of the ship's master and 32 seamen, was disclosed by the War Shipping Administration February 4.

The tanker, transporting 102,000 barrels of high octane gasoline, was attacked by a submarine in the Arabian Sea.

Water-Flooding Results In Illinois Publicized

Water-flooding operations in the McClosky limestone of the Clay City (Illinois) oil field resulted in an 87,000-barrel increase in 20 months in the production of the 41 wells involved, it was reported last week by the Bureau of Mines.

The additional oil, much of which might not have been produced by continued use of primary recovery methods only, was obtained by injecting 1,900,000 barrels of river water into three old wells along the edge of the field.

The results of the project, one of the few undertaken in limestone reservoirs, was embodied in a report prepared by C. P. Riggs, associate petroleum engineer, as report of investigations 3792, copies of which may be obtained from the bureau in Washington.

To Address ASME

T. C. Jones, president of Electro Chemical Engineering Company, will speak before the Mid-Continent section, ASME, on "Treatment of Water for Boilers, Internal Combustion Engines and other Industrial Units by means of an Electro Neutralizer" in the Mayo Hotel, Tulsa, at 8 p.m., February 8.

At Stillwater, Oklahoma, March 6 D. O. Barrett, chief engineer for Gulf Oil Corporation, Tulsa, will speak on "Practical Machinery Design."

Lease Sales Set

A public lease sale of 12 tracts in Kay, Kingfisher and Lincoln Counties, Oklahoma, will be held February 5, and bids will be received on three tracts in Gargin and Kingfisher Counties February 12. Sealed bid sale of oil and gas leases on restricted lands of the Five Civilized Tribes will be held at Muskogee February 13, and an auction sale of leases will be held at Pawhuska on lands in the Osage March 14.

Natural Gasoline Output Reaches High in November

Daily production of natural gasoline and allied products reached a new high in November, averaging 12,354,000 gallons as compared with 12,045,000 gallons in October, it was reported last week by the Bureau of Mines.

The major gain, registered in the Panhandle, was chiefly in production of liquefied gases, the bureau stated. Other increases occurred in Louisiana, Illinois and Arkansas.

The bureau reported the November production of light products as including 182,448,000 gallons of natural gasoline, against 191,898,000 gallons in October; 73,752,000 gallons of cycle products against 76,104,000 gallons; 18,690,000 gallons of iso-butane at natural gasoline and cycle plants against 18,312,000 gallons; 95,718,000 gallons of other liquefied petroleum gases at natural gasoline and cycle plants against 87,066,000 gallons; 19,572,000 gallons of liquefied refinery gas at refineries against 17,388,000 gallons, and 8,400,000 gallons of benzol, unchanged.

Stocks increased 7,308,000 gallons during the month but were 13,062,000 gallons less than on November 30, 1943, the bureau disclosed, reporting that stocks at refineries increased from 89,544,000 to 93,534,000 gallons and at plants and terminals from 85,176,000 to 88,494,000 gallons.

Daily Oil Runs Are Fixed For Fields in Oklahoma

Oklahoma State Corporation Commission fixed daily oil runs from allocated fields at 360,500 barrels for February and 363,000 barrels for March at its regular hearing in Oklahoma City, January 30. The January allocation was 256,000 barrels daily while present production is averaging about 360,000 barrels a day.

At the same time the commission increased the West Edmond pool allocation from 47,250 barrels a day to 56,250 barrels for February and 63,750 barrels for March. The Oklahoma City Wilcox zone was cut from 33,000 barrels to 32,000 barrels daily for each month.

The commission set the state's production of natural gasoline and distillate at 28,000 barrels daily for February and March.

Allocations were increased to 800 barrels daily in the Northeast Arcadia pool; the Cement-Madrano zone was increased to 1700 barrels daily; South Moore was granted an increase to 900 barrels daily, and the East Pauls Valley pool was increased to 2400 barrels per day.

Humble's Hawkins Case To Commence Wednesday

Trial of the Hawkins field suit will begin Wednesday in district court in Austin. This is the case in which Humble Oil & Refining Company claims that the Texas Railroad Commission's order does not allow it to recover an amount of oil in proportion to the company's share of the recoverable reserve.

Owners of townsite wells and wells on small tracts in the field have opposed the Humble application, but did not sue when the commission ordered its last increase. If Humble wins the case, it will establish the principle that in allocating crude, each operator is entitled to produce in proportion to his reserve.

War Pipe Lines To Be Strong Factor In Postwar Oil Movement, ICC Told

Possible sharp competition between the war-built pipe lines and the huge new tanker fleet for the transportation of oil in the postwar period is seen by Sam G. Spal, economist of the Interstate Commerce Commission, in a survey of postwar transportation problems just released by the ICC.

Declaring that these additions to the pipe-line network "will exert strong pressure for competitive oil traffic in the postwar period," Spal saw reasonable certainty that much of the volume formerly moved by tank car will be diverted, because of the lower costs of pipe line transportation, particularly in the southern and north central states.

"It also is reasonably certain that some of the new pipe lines will divert traffic from tankers, particularly in the case of the Plantation, Southeastern and Portland pipe lines," he said, pointing out that the first two have terminals at or near large cities which are at a considerable distance from the coast, while the Portland line was specifically designed for the purpose of reducing the tanker haul to Montreal.

So far as the Big Inch line in concerned, estimates show that the cost of transporting crude from Texas to the New York and Philadelphia refineries will be lower than that of the newest type of tanker, and there appears to be an adequate reserve of oil in the East Texas and West Texas-New Mexico fields to feed the line for many years, the report showed.

On the other hand, Spal pointed to the probable surplus of tankers after the war, the greater flexibility of tanker operations and the ability which they afford an oil company of conducting its shipping independently, without the joint action required in the use of the pipe lines, which he saw as predisposing the companies to revert to tankers, if other considerations, particularly cost, permit.

No Firm Forecast Possible

"Certain oil companies on the East Coast appear ready to make this change when full-scale tanker operation again becomes possible," he said. "As the continued use of this pipe line in oil service will depend to a large extent upon how the major oil companies on the East Coast evaluate these and other considerations, no firm forecast of its future can be made at this time.

"The prices which the government will ask for the pipe line and tankers may influence the decision of the companies to use the one facility, or the other, or both. If, however, the companies with the large refineries decide to use the tankers exclusively, it is difficult to see how the 'Big Inch' could obtain a sufficient volume of business from other refineries to enable it to operate economically."

Spal saw the possibility of a segment of the line being used to move oil to District 2 refineries, chiefly in Illinois, Indiana and Ohio, but this would call for large construction work on the part of the companies to connect the line to their refineries and "even if these extensions are laid, it is questionable whether this segment of the line could obtain a sufficient volume of business for economical operation." Here again, however, the companies may be influenced by the price at which the segment of line may be offered and it is also possible, but not likely, that new refineries will be built adjacent to it in District 2.

The cost estimates on which the report was based clearly imply that the Little Big Inch line will not be able to compete with the new tankers for refined oil traffic to the Atlantic Seaboard, although if the capital costs are reduced and the load factor is high, it may be able to operate. If the line is to be used to supply interior destinations with refined oils, extensions will have to be laid to the large consuming areas in order to minimize the otherwise extensive trucking involved. Products of independent refiners which might use the line probably would encounter strong competition from local refiners now serving District 2, it was foreseen.

Spal concluded that the converted and reversed pipe lines in Pennsylvania, New York and Ohio will be restored to their former status, pumping products from New York and Philadelphia area refineries westward.

The Project Five Pipe Line Corporation conduit from El Dorado to Helena, Arkansas, in conjunction with barge transportation, could economically serve the territory in the upper Mississippi and Ohio River Valleys, if it can maintain a high load factor, but the Florida Emergency Pipe Line probably will not continue in use when tankers become available.

Most of the new crude lines, other than those specified above, tapping new sources of supply, and substantially all of the remaining new refined oil lines are likely to remain in service, Spal declared.

Government policy, the report emphasized, will be an important factor in determining the disposition of the government-owned lines.

"Under existing law," it was explained, "Defense Plant Corporation and Defense Supplies Corporation have authority to own and operate, respectively, the Big Inch, Little Big Inch, Southwest Emergency, Florida Emergency, Ohio Emergency and the Richmond extension of the Plantation Pipe Line until January 22, 1947. Unless this authority is extended, arrangements must be started at that time for the liquidation of the pipe lines and other properties of these corporations. The future of these agencies necessarily is tied up with the broader problem of the disposition of war plants and other facilities. It can not be predicted at this time how rapidly or to what extent the government will eliminate itself from manufacturing, transportation and other business activities."

The over-all result of the expansion of pipe lines is a sizeable permanent addition to the country's transportation facilities, Spal pointed out. All but six of the new lines are privately owned and operated, and nearly all will continue in operation after the war.

Big Lines Biggest Problem

"Of the government-owned lines," he said, "the greatest problem will be faced in fitting the Big Inch and Little Big Inch into the postwar transportation set-up. They are long lines and of large capacity and it will be necessary for several oil companies to use them if they are to be successfully operated in oil service.

"Under the provisions of the surplus property act of 1944 these lines may be leased for a term of not more than five years, but they cannot be sold without the approval of Congress. Consideration will, no doubt, be given, in this connection, to the future need for these pipe lines for national defense and security reasons. The presently unpredictable course of future events and their timing will exercise a great influence on their ultimate disposition. It may be anticipated, therefore, that much public discussion will be required before it can be determined how these lines are to be used in the future."

Data incorporated in the Congressional Record January 31 by Representative J. Buell Snyder of Pennsylvania disclosed that operation of the two big pipe lines has saved the government approximately $325,000,000 in transportation costs which it would have incurred had it been necessary to move the crude and products by rail.

The information was furnished by George A. Wilson, PAW transportation director, in a letter to Snyder in which he reported that in the two years it has been in operation the Big Inch line has moved more than 195,000,000 barrels of crude and the Little Big Inch, in eleven months of operation, handled in excess of 63,000,000 barrels of refined products.

AAPG's New Tectonic Map of U. S. Is Ready

American Association of Petroleum Geologists, Box 979, Tulsa 1, announces a new tectonic map of the United States. Geologic structure, as evidenced and interpreted by a combination of outcropping areas, bedrock, surface disturbance, and subsurface deformation, is indicated by colors, symbols, contours, and descriptive explanation. Igneous, metamorphic, and selected areas of sedimentary rock are mapped. Salt domes, crypto-volcanic disturbances, and submarine contours are shown.

The base map shows state boundaries, rivers, a pattern of cities, and 1-degree lines of latitude and longitude.

The scale is 1:2,500,000, or 1 inch equals 40 miles. The map is printed in 7 colors on two sheets, each about 40 x 50 inches. Full map size is about 80 x 50 inches.

The map was prepared under the direction of the Committee on Tectonics, Division of Geology and Geography, National Research Council, made up of the following: Chester R. Longwell, chairman; Philip B. King, vice chairman; Charles H. Behre, Walter H. Bucher, Eugene Callaghan, D. F. Hewett, G. Marshall Kay, Eleanora B. Knopf, A. I. Levorsen, T. S. Lovering, George R. Mansfield, Watson H. Monroe, J. T. Pardee, Ralph D. Reed, George W. Stose, W. T. Thom, Jr., A. C. Waters, Eldred D. Wilson, and A. O. Woodford.

Prices, postpaid are: $2.00, rolled in mailing tube; $1.75 folded in manila envelope; $1.50 in lots of 25, or more, rolled or folded.

Constructive Solution Is Urged by IPAA in Crude Oil Price Problem

Delay has caused the crude oil price problem to become an emergency matter, needing constructive solution, members of the executive committee and regional vice presidents of the Independent Petroleum Association of America, meeting in Oklahoma City, January 29 and 30, said in a resolution.

The IPAA executives cited that "further undue delay will decrease the ability of the domestic oil producing industry to find new sources of supply, to maintain present reserves in efficient operating condition and to preserve the program of conservation which has been a development of many years."

The resolution further urged that members of the domestic crude oil producing industry to make every effort to supply data requested by the Office of Price Administration in connection with the investigation now underway.

A recommendation by the IPAA permanent price differential committee that the association membership be polled in order to ascertain the will and views of the membership concerning the question of a permanent price differential was adopted. Ballots will be mailed to the membership within the next two weeks. Balloting will continue until the next meeting of the executive committee probably in April.

The IPAA executives also went on record as advocating extension of work being done by the United States Bureau of Mines in connection with oil conservation.

Western District Luncheon

Ralph T. Zook, IPAA president, expressed his appreciation for the large attendance. Out of a possible 43, there were 31 present representing 16 states.

More than 100 oil operators Tuesday attended a district membership luncheon meeting presided over by Eugene Jordan of Oklahoma City, IPAA vice president for Western Oklahoma. Zook told them that there are some who are ready to write off the United States as a strong producing nation and depend on the importation of foreign oil.

"Others are planning to use the greatest oil market in the world, the United States, to cure the ills of some countries at the expense of our country," Zook declared. "The independent producer sees in such thinking a definite threat to his existence.

"Of the problems that are likely to confront us at the end of the war, if not before, two are outstanding—the price of oil and imports," he said. "They go hand in hand. An adequate price for oil brought about by uncontrolled domestic production or from a flood of cheap foreign oil can reduce our domestic oil industry to one of impotence. If that comes about, the very safety of our nation is in jeopardy."

Active support by congressional committees of the program of the American oil industry for an adequate increase in the price of crude oil to meet war-stimulated costs of finding and production has boosted enormously the chance of obtaining that increase, Russell B. Brown, IPAA general counsel, said.

Brown said that the consideration being accorded by OPA is not due to a change in attitude of the OPA toward a price increase, but reflect the reaction of the OPA to the recommendations of the Patman small business committee.

The IPAA general counsel said that in spite of failure to give the industry a price increase, there has been no attitude of "quitting" and by conservation of both manpower and materials allotted, a better job of both producing and exploration has been done than the industry previously believed could be done.

China's Gasoline Needs To Increase Tremendously

Close to 100,000,000 gallons of gasoline will be required for the relief and rehabilitation of China in the first year following the war, it was estimated last week by the National Planning Association in a survey of the relief needs of the country. The gasoline requirements will be approximately double the normal prewar consumption, only a small fraction of which was produced domestically.

Free China's production of gasoline was only 1,800,000 gallons in 1942 and, while it has gone up somewhat since, in all probability is less than 4,000,000 gallons a year, the association review said. Oil reserves in occupied China are negligible, and only a small amount of shale-oil is produced in Manchuria.

"China does not produce enough to keep more than perhaps a thousand trucks operating," it was declared. "China's output of gasoline can be somewhat augmented by sending in refinery machinery; but, even so, China will continue to rely upon imported gasoline."

Petroleum Geologists' Conference Is Canceled

Ira H. Cram, chairman of the executive committee of the American Association of Petroleum Geologists, announced cancellation of the fourth wartime conference which had been scheduled at Tulsa March 20-22.

The action was taken in compliance with the request of War Mobilization Director James F. Byrnes, who recently asked that associational meetings be discontinued until further notice as a travel conservation measure. Cram announced that the association's business committee will meet at the Mayo Hotel, Tulsa, March 27.

Suman Is Honored

Three hundred friends and associates of John R. Suman honored him at a sumptuous dinner given January 30 at Rice Hotel, Houston. Suman, long connected with the Humble Oil & Refining Company, left next morning for New York to assume his duties as vice president of Standard Oil Company (New Jersey). Speakers on the occasion included George A. Hill, Jr., president Houston Oil Company, and Harry C. Wiess, Humble president, who termed Suman "the father of petroleum engineering." George Sawtelle, president of Kirby Petroleum Company, presided.

Lead and Tire Shortages Make Auto Outlook Gloomy

Owners of automobiles, trucks and busses are facing the toughest period of the war, with 1,500,000 more passenger cars due to break down during the year, gasoline and tire supplies remaining critically short, and the serious shortage of lead necessitating greater conservation of batteries, the Office of War Information warned February 2 in a review of the automotive situation.

Highlights of the situation were summarized by OWI as follows:

Gasoline: Although production of all types of gasoline is at record level and every effort will be made to increase production, civilian supplies at best will continue unchanged during 1945 or for the duration of the European war, "provided military demands for gasoline and petroleum products are not increased and the transportation problem does not become more critical." Consumption of gasoline during the fourth quarter of 1944 exceeded allocations, thereby reducing the Nation's reserves.

Tires: Production of synthetic rubber in 1945 is currently scheduled at more than 1,000,000 long tons; military requirements for heavy duty tires have jumped 30 percent; tires for civilian trucks and busses will be short, probably available to Priority I vehicles only; B and C drivers may anticipate stringent screening of needs and the possibility of a small increase in tire allocations over 1944; rayon cord requirements will not be met and smaller size truck tires will have to be made with cotton cord, which in turn will vie with Army tentage demands; the manpower problem is still critical; the crude rubber supply is dwindling below 98,000 tons; and a $70,000,000 government-financed expansion program for truck tire manufacturing is under way, to add approximately 25 percent to the Nation's total tire production capacity.

Batteries: The 1945 supply of lead will be approximately 20 percent below estimated requirements; WPB will authorize construction of added facilities for battery production.

The gasoline allocation from PAW to ODT for the current quarter is 986,000 barrels daily, sufficient to meet ODT's estimated requirements except for a slight decrease in the East Coast and West Coast districts, short in the former by 9000 barrels and in the latter by 2000 barrels daily.

Foreign Economic Administration reports show gasoline exports from the United States—lend-lease and commercial sales, but excluding all military—amounting to 15,700,000 barrels in 1944.

"Increased gasoline supplies for use abroad are expected from the Near East and Middle East late this year," OWI said. "If the war's pace should slacken late in 1945 or if 'Victory-in-Europe' Day should arrive at that time, some surpluses may be available for civilian use, depending on a decrease, if any, in military demands. Officials cautioned, however, that more liberal rationing of gasoline after 'V-E' Day is contingent on a number of factors which would prevail at that time.

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STAFFORD PARK has returned to his duties in the Long Beach, California, office of Eastman Oil Well Survey Corporation after two years in the Navy.

Previous Revenue Rulings Are Upset by Supreme Court

Rulings of the Commissioner of Internal Revenue with respect to the tax status of equipment involved in sales of oil and gas leases in which the sellers retain a royalty interest of one eighth of the production were upset by the Supreme Court January 29 which held that the transfer of the equipment in such instances constituted an outright sale.

The issue was involved in an appeal by W. G. Choate from an adverse decision of the Tenth Circuit Court of Appeals holding that the sale of a lease by Choate and Hogan to the Sylva Oil Company for a cash consideration of $110,000 and a reservation of one eighth of the production constituted a sublease and the sellers would have to look to depletion for the return of their capital.

Following a decision by the tax court holding that the transaction was a sublease but that there had been an absolute sale of the equipment, for the unrecovered cost of which the partners were entitled to an allowance, the commissioner appealed to the Tenth Circuit Court, in the case of Choate, and the Fifth Circuit Court with respect to Hogan, winning in the former and losing in the latter.

The high court opinion, delivered by Justice Douglas, held that the depletion provisions of the revenue act and the Internal Revenue Bureau regulations thereunder contain no provision for depletion of equipment used in the operation of oil and gas wells, but the latter do provide for depletion and depreciation of improvements under another section of the act.

"Depletion is applicable to wasting assets—to the exhaustion of natural resources, not of property used in a business," Justice Douglas commented. "That distinction between depletion and depreciation runs through the basic provisions of the act. And the history of the depletion provisions indeed makes clear that only intangible drilling and development costs, not costs represented by physical property, are returnable by way of depletion.

"In the second place," he continued, "the tax court found that the parties intended a cash sale of the equipment. That question is argued here as if it were open for redetermination by us. It is not. It is the kind of issue reserved for the tax court.

"Once a sale of the equipment is conceded, it is not denied that petitioner is entitled to an allowance for the unrecovered cost of the equipment transferred. No question is presented concerning the allocation of a portion of the purchase price to the equipment."

Whitman to PAW

C. H. Whitman, manager of crude oil purchases in Louisiana for Standard Oil Company of New Jersey, and a member of the company's management committee in Louisiana, has been granted a leave of absence to go to Washington, where he will join the Petroleum Administration for War as assistant director of its supply and transportation division.

Whitman began his company service 30 years ago at Baton Rouge. He was transferred to the company's offices in New York in 1926, and to Shreveport, Louisiana, in 1937.

Crude Oil Production in the United States

(Estimates compiled by The OIL WEEKLY. All figures indicate daily averages, in barrels.)

State or District	Production in Week Ended Feb. 3	Jan. 27
Alabama	300	250
Arkansas	81,300	81,700
California	893,500	891,750
Colorado	10,050	9,450
Florida	50	50
Illinois	197,200	200,300
Indiana	12,600	12,550
Kansas	257,400	267,250
Kentucky	29,450	30,450
Louisiana	357,250	358,250
North	68,000	69,000
South	289,250	289,250
Michigan	46,700	42,550
Mississippi	48,150	48,850
Missouri	100	100
Montana	23,640	22,830
Nebraska	950	950
New Mexico	104,050	104,050
New York	12,950	12,950
Ohio	8,750	8,200
Oklahoma	363,800	361,900
Pennsylvania	33,100	33,500
Tennessee	35	35
Texas	2,149,950	2,120,300
Upper Gulf Coast	552,650	552,650
East Texas Field	400,550	370,900
Rest of Eastern Texas	144,100	144,100
Lower Gulf Coast	243,900	243,900
Southwest Texas	78,400	78,400
South Central Texas	20,050	20,050
West Texas	478,550	478,550
North Texas	143,050	143,050
Panhandle	88,700	88,700
West Virginia	9,000	9,150
Wyoming	98,000	99,750
Total United States	4,738,275	4,717,115

Petroleum Policy Group Is Continued by Senate

Continuance of the special committee on petroleum policy from February 1 to the end of the current Congress in January, 1947, was approved by the Senate January 29 without debate or formal vote.

The committee, set up to make an investigation of petroleum resources in relation to the national welfare, was headed last session by the late Senator Francis Maloney of Connecticut, who also headed the special committee to investigate gasoline and fuel oil shortages.

Several reports were made by the committee from time to time, relating the oil situation as affected by the war and discussing the steps taken by government and other agencies to provide the products needed for the war program and for the maintenance of essential civilian activities.

Industrial Plants in East Prohibited from Using Oil

Severe weather conditions which disrupted rail movements and necessitated imposition of a three-day embargo on all shipments except war goods to clear congested lines and yards, sharply cut East Coast oil deliveries and necessitated issuance of a PAW order prohibiting the use of residual fuel oil by 15 utility companies and 72 large industrial plants on the East Coast, which had available coal supplies running as high as 30 days' requirements.

The order is estimated to save 900,000 barrels of fuel oil a month, but it is possible that it will be revoked within that period, since the coal supplies to be drawn upon are inventories carried solely for emergency use.

Bureau of Mines Records Gains in Oil Production

United States production of crude oil in 1943 totaled 1,505,613,000 barrels, a new record 9 percent more than 1942 and 7 percent more than the former high recorded in 1941, it was announced last week by the Bureau of Mines in its final report on the year's operations.

The Bureau's report on November, 1944, production, issued simultaneously, indicated, however, that last year's output would exceed that of 1943 by 300,000,000 barrels or more.

Reviewing 1943, the bureau reported that Texas supplied 111,000,000 barrels of the 119,000,000-barrel gain over 1942, with California showing an increase of 36,000,000 barrels and Kansas, Louisiana and New Mexico smaller increases, offsetting declines of 24,000,000 barrels in Illinois, 18,000,000 in Oklahoma and 10,000,000 in Mississippi.

Total demand for domestic crude rose from 1,396,184,000 barrels in 1942 to a new high of 1,500,703,000 barrels in 1943. Crude runs to stills aggregated 1,429,738,000 barrels, a gain of nearly 96,000,000 barrels.

The extent by which the records of 1943 were broken last year was indicated by the bureau's monthly report for November, which showed domestic crude production for the first eleven months at 1,532,471,000 barrels against 1,368,024,000 barrels for the same period in the preceding year.

The bureau reported the 11-month products output to include 677,684,000 barrels of motor fuel against 553,336,000 barrels in 1943; 71,883,000 barrels of kerosine against 65,745,000 barrels; 220,094,000 barrels of distillate fuel oil against 191,585,000 barrels; 420,177,000 barrels of residual fuel oil against 379,344,000 barrels; 37,525,000 barrels of lubricating oil against 35,462,000 barrels; 740,040,000 pounds of wax against 687,964,000 pounds; 1,631,000 short tons of coke against 1,262,600 tons, and 6,515,000 tons of asphalt against 6,291,200 tons.

Gas Meetings Cancelled

The executive Board of the American Gas Association has cancelled nine meetings formerly authorized to be held between the dates of May 7 and June 4 including Natural Gas Convention, Cincinnati, Ohio, May 7-8; War Conference on Industrial and Commercial Gas, Toledo, Ohio, March 29-30; and Production and Chemical Conference, New York, June 4-6.

Editorial Index to 1944 Issues Available Upon Request

Due to the paper shortage, THE OIL WEEKLY again is deviating from its long-standing previous custom of incorporating its Annual Editorial Index in one of its regular issues mailed to all subscribers. The complete editorial index covering all issues of THE OIL WEEKLY published during 1944, bound separately in convenient pamphlet form, will be sent without charge to each subscriber requesting a copy.

Address requests to Circulation Department, Box 2608, Houston 1, Texas.

HOUSTON NOMADS INSTALL OFFICERS

Officers of Houston NOMADS were installed at the annual meeting January 29: Front row, left to right: W. A. Davis of Baker Oil Tools, Inc., vice president; Tom W. Nelson of *The Oil Weekly*, president; H. J. Craig of Baash-Ross Tool Company, past president and now national regent; C. E. Whitney of Baker Oil Tools, Inc., regent. Back row: Ray Doan of Coffing Hoist Company, assistant sergeant-at-arms; Harry E. Estes of Reed Roller Bit Company, assistant secretary-treasurer; Charlie Thornhill of Thornhill-Craver Company, secretary-treasurer; E. F. Baldwin of Hughes Tool Company, sergeant-at-arms. One other officer, not shown above, is E. L. Lorehen of Cameron Iron Works, assistant secretary-treasurer.

Littell Says Ample Time Allowed for Biddle To Tell FDR About Elk Hills

The highly controversial initial contract between the Navy and Standard Oil Company of California for development of the Elk Hills naval reserve, which was superseded by the present agreement, again came before Congress last week, when a memorandum prepared by Norman Littell, former assistant attorney general in charge of the lands division of the Department of Justice, was laid before the House by Representative Lawrence H. Smith of Wisconsin.

Littell's memorandum did not in any way challenge the existing contract or impugn the motives of those who negotiated the original agreement, but was confined to detailing the differences which arose between him and Attorney General Francis Biddle over Littell's presentation of the case before the Public Lands Committee in June, 1943.

The former lands division head, who was removed from office by President Roosevelt after he had rejected Biddle's request that he resign, charged the Attorney General had attempted to muzzle him when he appeared before the House committee and had later untruthfully denied that any attempt had been made to direct Littell's testimony.

Littell stuck by his originial statement that "in degree" the original contract went "beyond the contracts involved in the Pan-American and Mammoth (Teapot Dome) cases and in principle there is no controlling distinction, asserting that that view was expressed in his original report to Biddle, who took no exception to it until the late Secretary of the Navy Frank Knox expressed indignation at its implications.

Says Ample Time Allowed

The memorandum asserted that Littell's report was submitted to Biddle in ample time for him to prepare an opinion for the President before the Attorney General left for Hot Springs, Virginia, where has was vacationing when the committee called Littell, and there was no basis for the charge that he had given his opinion to the committee before the President could be advised. In fact, he said, Biddle already had given a copy of the report to Standard Oil Company lawyers.

"From these facts," Littell said, "it is readily apparent, (a) that Mr. Biddle had ample time in which to draft an opinion to the President if he desired to do so, but he had chose to go on vacation instead; Congress could scarcely be asked to postpone hearings until after the return of Mr. Biddle when Standard Oil Company was drilling wells in the Naval Petroleum Reserve and pumping oil daily; (b) that when I read my report to the committee, it was only after two postponements at Biddle's request, and on Mr. Biddle's instructions to do so; (c) that Mr. Biddle had plenty of time to change the language of my report if he did not approve of it, and his disapproval came entirely as a result of press reports which hurt the feelings of Secretary Knox, who had signed the contract, and not as a result of any improper statement in my report; (d) that throughout, repeated efforts were made to restrict my testimony, which is in flat contradiction of Biddle's statement 'Nobody objected to his going down and testifying. He went down and testified. He wasn't asked not to at all. He testified at once when he was told to'."

Temporary Agreement Results

Littell asserted that after the flare-up over the original contract, he was excluded from conferences and negotiations on the new agreement, but his repeated objections to proposed new terms and refusal to approve a permanent agreement made in such haste that the government's interests could not be adequately protected resulted in the temporary agreement which was made to cover the period required for the writing of a new contract.

He also attacked Biddle's insinuations that he had instigated the publicity which the situation received, declaring that the reverse was true and the stories emanated from the Department of Justice press relations staff.

"It is inevitable that memories of the 'little black bag' in the Teapot Dome cases should have been revived in the press," Littell said. "One of the identical oil reserves was involved in another bad contract. The press rendered invaluable service to the American people in fully illuminating the facts.

"The real trouble," he concluded, "was that Mr. Biddle was simply in a twit trying to run with the hare and hunt with the hounds."

Bill to Tax Natural Gas Introduced in Texas House

A proposal to tax natural gas has been introduced in the Texas legislature by Representative Pat Wiseman of Jacksonville. It provides for a tax of one cent per thousand feet on sweet gas, and one half cent per thousand on sour and casinghead gas. However, if the gas is reinjected, it is exempt from the tax. Then there is a tax of one eighth of one cent per gallon on all liquid hydrocarbons extracted mechanically, and one fourth of one cent on those recovered without mechanical aids.

The third phase of the measure is a tax of one cent per thousand to be paid by gathering systems for all gas gathered which is to go to gas transmission lines.

In 1941, this same bill with slightly different tax rates was passed by the House, but did not get to the Senate.

A hearing has been scheduled February 5 by the House committee on oil, gas and mining on the Leonard bill, which would extend leases on submerged lands for the entire producing life of the property.

A short bill introduced by Representative Durwood Manford of Smiley would limit to 15 years the life of undeveloped mineral leases.

☆

NATHAN J. BEALS, comptroller of Creole Petroleum Corporation, New York, and Ralph W. Rager, comptroller of Oil Well Supply Company, Dallas, have been elected to membership in the Controllers Institute of America.

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True Gas Conservation Means Ratable Taking

Cross-section of opinion shows that operators agree with broad principle but point to difficulties that may be expected in making practice uniform and mandatory. Quick solution of problem will be to the advantage of all

By GEORGE O. IVES, Staff Writer

TRUE gas conservation cannot be carried out without ratable taking. It is simple equity and should be mandatory.

This is the opinion expressed by the majority of operators replying to a request by THE OIL WEEKLY for a frank discussion of both sides of this question. These operators represent a fair cross-section of the natural gas industry, including major companies and independents, producing companies and transmission companies, many of whom are also producers or transporters of crude oil. Replies from some lawyers whose opinions were solicited give rise to renewed concern as to whether the Railroad Commission can write a valid order requiring ratable purchase of gas from a common source of supply under existing Texas statutes. As a whole, no one disagrees with the principle of ratable taking, but replies brought out some interesting aspects, pointing to the difficulties to be encountered in making the practice uniform and mandatory.

Problems Involved

Granting, in view of the importance being assumed by natural gas recently, that its conservation deserves careful consideration; and granting, from a preponderance of the replies that provision for enforcement of ratable taking of gas production is a primary requisite to true conservation, what are the problems confronting the industry and regulatory bodies regarding the situation, and how may they be solved? Certainly not by each branch striving to protect its own interests without regard for others, and not by the efforts of any single interest or group of interests, but by intelligent cooperation between all.

The purpose of this discussion is to attempt to point out the existing problems and to present suggestions made by competent operators as to how they may be solved.

It was said by some that if gas proration were handled in the same manner as oil, most of the problems would not exist. This is believed to be true, but others pointed out that in actual practice the production, transportation, and marketing of gas present immensely greater complexities than are found in dealing with oil or other petroleum liquids, not the least of which is the fundamental fact that it cannot be stored above ground in any considerable quantities, either at the point of origin or delivery.

In trying to arrive at the best means by which ratable taking of gas production may be achieved to the satisfaction of the three principal divisions of the industry—producing, transmission and marketing—and at the same time satisfy the principles of conservation, the question naturally resolves itself into three elements: mechanical, economic, and judicial.

Mechanical Problem

Independently of any effort to prevent physical waste within the reservoir as a whole, the ideal condition desired by the various well owners questioned would be a system of withdrawal from the wells within the field which would prevent, or minimize, the movement of gas across property lines. Excessive withdrawals from certain wells or areas within a pool, if long continued, inevitably result in movement of gas from surrounding areas into the lower-pressure areas created in the reservoir by the well or wells from which the greater quantities of gas are being produced. This leads directly to the inescapable relationship between ratable taking and ratable production. In the final analysis operators think it will be necessary that regulatory bodies be vested with authority to prorate the total withdrawal from any common reservoir among the various wells in such a manner that each will be allowed to produce at rates which reduce to a minimum the movement of gas across property lines. Ratable production can only occur under these conditions, and cannot continue without equally ratable taking by the transmission company or companies. Such ratable production is, in essence, a means of protection of correlative rights of all property owners, it was declared.

No attempt was made to minimize the difficulty faced by regulatory bodies in allocating to each well a daily allowable designed to prevent migration of gas within the reservoir. For an ideal situation it would be assumed that if the subsurface factors in a reservoir, such as permeability, porosity, sand thickness, and reservoir pressure were uniform, and if wells were located on surface units of uniform size and shape, the each well would have a daily allowable identical in volume. However, operators realize that non-uniformity of both surface and subsurface conditions is the rule rather than the exception.

The first step suggested in deciding upon an equitable distribution of the gas to be withdrawn from any reservoir was the determination of the producing potentialities of the portion of the reservoir underlying each surface unit containing a producing well. The measurement establishment of an "open flow potential" for any well depends upon too many contributing factors for this alone to be used as a basis in setting allowables. Differences in net penetration of the producing formation by the well bore, methods of completion and flowing, acidization or lack or it, and many other mechanical factors were pointed to as causing wide differences in potential tests even though uniformity of formation exists. A well, according to some, should be considered not altogether as a mechanically contrived bore lined with steel, whose ability to transmit gas from the reservoir to the surface varies greatly with the method of drilling and completion. It should better be looked upon as merely a conduit through which, by its own energy the reservoir may deliver gas to the surface. Therefore, survey replies indicated most operators believe reservoir conditions alone should determine the proportionate part of the production to be allocated.

Allocation Formula

At the same time it was recognized that there is a definite relationship between the delivery of gas to the surface in a given time, and the amount of gas immediately surrounding the well bore, indicating permeability, porosity, and pay thickness in some comparison to other wells. Some operators of large gas-producing properties would be content with a simple formula taking into account only surface area and pay thickness, saying that in the long run it would be more equitable than a formula which has ordinary well potentials as one of the basic factors.

Other operators think an allocation

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formula should be devised with the single purpose of having the operating results of its application tested at frequent intervals to determine the effects of allowed withdrawals with the idea of making adjustments in those wells where bottom-hole pressures decline more rapidly than others, so that a uniform rate of decline may be preserved throughout the reservoir.

Where wells are drilled on smaller tracts, it should be obvious that they have less allowable than those on larger ones. More wells on smaller tracts would withdraw more gas from similar areas than those larger areas served by one well, reducing reservoir pressure and causing migration away from the area of wider spacing. Some thought regulatory commissions should be given power to prevent drilling of gas wells on surface area so small that expected revenue from calculated reserves in place at assumed rates would not justify investment, the owners of such small tracts being compelled to unitize with others to form drilling units of the size prescribed by the administrative agency. Most operators agree that unitization for the purpose of developing gas fields in an orderly manner is to be preferred. Many of these same operators think such unitization should be entirely voluntary. Many others question that voluntary unitization would ever bring about the complete realization of a sound program.

Economic Problems

The survey showed that economic aspects of ratable taking of gas production bring forth complexities which make ratable production itself seem mere routine. Here arises the questions of paramount importance to the transmission company as well as to the producer. Of necessity the transmission company is faced with the need for long-term contracts which must be precisely balanced as between receipts and deliveries.

These contracts are binding as to quantity of gas delivered and as to price. They must be carefully made to take care of seasonal fluctuations and to take care of peak loads at morning and evening. What happens when additional wells are drilled by operators with whom the transmission company has no contract, when the total demand from the field is apportioned among the total wells and the original producer finds himself unable to deliver the contracted amount of gas from his part of the field allowable? Should it be the responsibility of the producer to arrange for purchase of gas from other producers to obtain enough to satisfy the demands of his contract? Will the contract with a single producer be binding past the amount which he legally may produce under order of the regulatory body? It was suggested that if the total demand for the field were allocated among the various wells on a ratable production basis, any purchaser would be forced to take ratably from each well in order to obtain his requirements. In such cases is it then the responsibility of the transmission company to build facilities for gathering the gas from several points which he has formerly obtained from one well or one lease?

Problems Multiply

The foregoing problems will inevitably arise when only one purchaser is connected to a field. They are multiplied many fold when two or more transmission companies are taking gas from the same field. Under the present circumstances there is the all-important question of price differentials as between the various purchasers.

How will it be possible to take ratably from leases adjacent to each other but with a wide diversity of price contracts, asks one transmission company. In the nature of things, a producer with a long-term contract with one purchaser at a rate of 2 cents per thousand cubic feet will not be content to continue to deliver gas at that rate long after his neighbor has started selling his gas for 5 cents to a competitive purchaser.

Like Allocating Oil

One operator pointed out that there are no inherent differences in the principles of allocation of oil and gas, and that a practical method of operation would be for the purchaser to make nominations for the purchase of gas to be delivered by the seller at a designated point or points, at a specified pressure, and at a price which is posted with the proper regulatory body. The gas would have certain specifications as to quality and be measured under specified standard conditions. There could be premiums or penalties for variations from these standards, all of which could be included in the posting. By specifications as to quality reference is made to British thermal unit content, hydrocarbons present, etc. All producers in the pool then have an equal price basis for the amount allocated to them to produce, and the problem is resolved to the economics of producing and delivering the properly conditioned gas to the purchaser.

Experienced operators say that the additional expense of acquiring meters and gathering systems would be small compared with the tremendous benefits to be derived from ratable taking. They do not believe these objections present any real obstacle, pointing out that ratable take of oil required purchasers to install additional gathering lines and tanks and to employ additional gaugers, nor would producers of gas fail to solve any additional operational problems arising from ratable taking. At least one operator suggested that since the Railroad Commission requires that there be a line and meter to each well, and two lines and two meters if a well is dually completed, much of the talk of additional expense is caused by reluctance to enter a program of ratable taking rather than fear of additional costs.

Much has been said regarding production by transmission companies of their own reserves, filling their demand from their own properties without purchasing from producers on adjoining acreage. The situation in which such a transmission company finds itself, may well be illustrated by taking a certain case which possibly will explain the resistance of some transmission companies to ratable production orders.

Case In Point

A certain company constructs a pipe line at great expense whose operation involves transportation of gas from a large reserve in Texas to other states. No prudent company would contemplate such a venture without controlling reserves adequate to supply the line in sufficient volume over an asuumed operating life producing a reasonable return on invested capital. This company actually purchased or controlled adequate reserves. Unfortunately, when the company commences to produce a sub
stantial amount of gas daily from it
own reserves, owners of reserves in th
same field near or contiguous to th
holdings of the transmission compan
but without a market outlet of the
own, suffer drainage which increases
time goes on.

Advantages of Ratable Plan

At such a period with other pro
ducers having drilled wells on the
property, a ratable production order b
the state regulatory body would alle
cate the existing demand among a
wells in the reservoir, including wel
owned by others than the compan
itself. The order would not directl
compel the transmission company t
buy gas from such other well owner
but would reduce the allowable produc
tion from the company's own well
compelling it to either purchase ga
from the other producers, or to tak
gas from another reservoir. In the latte
case the administration agency woul
find a reduction in the total deman
from the first reservoir, resulting i
further reallocation and decreased pro
duction from each well. The law o
diminishing returns under such cond
tions would force development of new
markets, or force taking ratably fro
the first field throughout to maintai
demand.

The interstate transmission compan
whose prudence prompted it to buy
sererves adequate to service its lin
over its predicted life may have been
indirectly compelled to purchase ga
from others, but on the other hand ha
it not done so under compulsion, adja
cent land owners who otherwise would
be without a market might have suf
fered drainage to the extent of confisca
tion of property at the hands of th
transmission company.

Controversial Issues

The operator saw these operations a
a challenge to the constitutional com
petence of a state to see that fair pla
obtains among those attempting to cap
ture the gas reserves within a commo
reservoir. The issues are controversial
Should a state permit one who provide
a market for his own reserves to drai
the gas of others who have failed t
find a market for their own? Shoul
there be a system of control which re
stricts the opportunity of a gas trans
mission company to withdraw gas fro
a reservoir while others without a mar
ket are trying to provide one, eve
though the result of such restrictio
would be to force the transmissio
company to buy gas from the others
From the standpoint of conservation, i
the company could produce from onl
its own properties without causing m
gration of gas from across propert
lines there should be no reason to ex
pect it to divide its market for its ow
gas. But unfortunately if the compan
produces from its own wells with n
withdawals being made from those o
other owners, it would soon be pro
ducing its neighbor's gas.

The constitutional competence of
state to establish a system which woul
insure a just distribution among th
various well owners in a pool wa
established as early as 1899. In the cas
of Ohio Oil Company vs. Indiana, the
United States Supreme Court upheld
the coequal rights of all owners to take
from a common source of supply, recog

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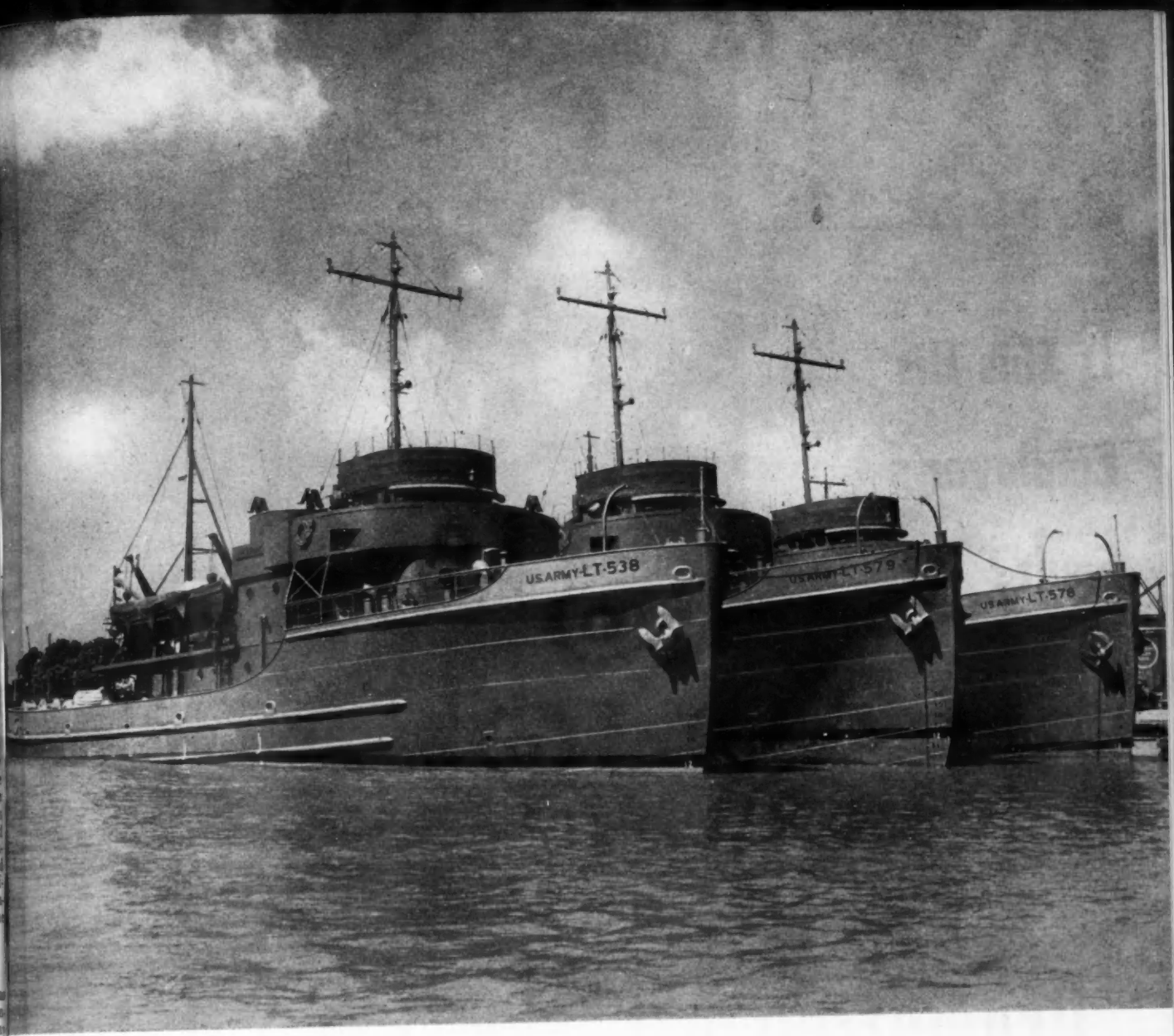

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Promoting off-the-job Safety

OFF-THE-JOB accidents among employes are becoming the subject of growing attention from management. A great many firms have been slow to see the connection between the company and time lost from an accident that happened beyond an employe's line of duty. Or if this relationship has been apparent, there has been a pronounced reluctance on management's part to voice any interest in it. The general policy has been for management to refrain from any suggestions about the employe's safety when he was away from his place of work. The question is still a moot one. Opinion is divided on just where a company's responsibility in off-the-job accidents ends, or how far industry should go in trying to control such accidents. One thing is recognized however, and that is that time lost from an accident off the job amounts to as much if not more than from mishaps encountered while the employe is working. Serious as this fact is even in normal times, now when help is scarce and nearly all companies face the problem of manpower shortages, any lost time takes on added significance.

At the National Safety Congress meeting late last fall, a panel discussion was held on "What Industry Can and Should Do About Off-the-Job Accidents," and was conducted by several of the nation's top safety men.

Responsibility and Prevention

The panel was promoted around the four following questions:

1. What is the extent of industry's responsibility in promoting off-the-job safety?

2. Who should be responsible for the off-the-job program?

3. What are the practical incentives for avoiding accidents off-the-job?

4. What records should industry keep of off-the-job accidents?

Management and industry's concern and responsibility in furthering off-the-job safety among employes should be direct, in the opinion of R. S. Bonsib, Safety Director of Standard Oil Company (New Jersey). He based this belief on the forceful statement that "Industry or management is responsible for production and anything that interferes with production is of primary concern to management." Carrying his argument further, he said that "What a man does may not be of any direct interest to management, provided that man does nothing that is going to impair his efficiency to carry out his regularly assigned duties; but if he goes hunting and accidentally gets shot, and can't perform those duties, then management loses his services and production which his services represent, just as surely, just as effectively as if he had been hurt on the job. Therefore, I think that industry is 100 percent responsible in promoting off-the-job safety."

Others participating in the panel agreed with Bonsib that undoubtedly industry and management have a responsibility for trying to reduce off-the-job accidents. All were unanimous in their

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Allis-Chalmers tractor type, high-torque engines are built to handle continuous maximum load. They make pumping costs look good.

Model L, 590 ft. lbs. torque. Model E, 400 ft. lbs. torque. Model U, 200 ft. lbs. torque. Model W, 128 ft. lbs. torque. Model B, 87 ft. lbs. torque:

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feeling that the approach must be through an educational campaign designed to combat and reduce off-the-job hazards.

Industry, through a constructive effort in its own safety program, can take the lead and indirectly can promulgate such a campaign.

Suggested Program

Suggested action included: encouragement of employes to participate in any community safety activities; intensification of on-the-job programs; introduction of the problem into monthly or weekly foremen's meetings; mixing off-the-job safety concepts with ideas for reducing accidents on the job and presenting them together; brief publications for foremen with facts and figures that they can absorb and in turn impart to their men; stressing the human angle, that accidents are always attended by some suffering and there is always the danger of being handicapped for life.

How far some companies are already going to try to make employes realize that they are more safe on the job than off was revealed when several people not included in the panel, commented on the question.

A representative of American Telephone & Telegraph Company explained that his company regards the matter from both the economic and humanitarian standpoint. As a primary step to bring safety off-the-job to its employes' attention, his company has been sending, for the past five years, an attractive calendar, to the home of employes. The calendar carries a message on safety that applies to on or off the job, and the calendar is renewed each quarter. Recently this has been supplemented with a pamphlet entitled, "You are safer on the job than you are off the job," consisting of 26 pages, enumerating accidents that can happen at home.

This same company stresses meetings also. "We have a series of meetings throughout the state," the representative noted, "and we advise the families of employes and they all attend in droves, their wives, daughters and sons. We have motion pictures; we have periodicals. Our general plant manager attends those meetings, and everybody has a good time."

The ancient and dangerous habit of looking for gas leaks with a match is likely to cause explosion and fire.

The danger of pedestrian accidents is always present. Both driver and the pedestrian have the responsibility for trying to avoid them.

"Part of Our Job"

"Do you bring up off-the-job safety?" is a question often asked the 130-odd members of the Portland Cement Association. A spokesman for that group reported that practically all of them say, "Yes, we consider it a part of our job to get off-the-job safety into these men's minds as well as on-the-job safety."

This association carries on a scheduled program with regular meetings. Two films are shown at the meetings, one relating to on-the-job safety, the other, off-the-job. "We have traffic safety," the representative said, "also pedestrian safety, diet, and so forth, all of which is felt to have a direct bearing on the productive ability of the men. We consider it is proper and fitting that the company take the lead in instructing those men on off-the-job safety."

Employes should be stimulated to assume responsibility for carrying on the off-the-job safety program, once it is initiated by management, Bonsib, of New Jersey Standard, believes. "I don't think we are going to get anywhere with off-the-job safety unless management leads, but I do think management should stimulate employes to carry the responsibility," he emphasized. "I think," he continued, "the responsibility falls directly on the employe himself. Also, we men don't like to admit it, but we usually do what the women tell us, and they are responsible. If you can get them interested, they certainly will get results. The women must realize that they are an influence in this, and if we get them interested in off-the-job safety, we will get them interested in on-the-job safety too. But the responsibility, I think, falls directly on the employe."

Incentives for preventing off-the-job accidents are the same as for on-the-job: abhorrence of suffering and fear of loss in compensation, with possible permanent reduction in or elimination of earning power. It was pointed out that when a man gets hurt on the job, he usually gets compensation. When an accident happens off the job, the person suffering it may have hospitalization, but that is frequently about all. Sometimes a generous company continues such a person's salary, but this is not always the case, especially where the work is on an hourly basis. Dramatizing these incentives affords an excellent opportunity to impress on employes the serious consequences of off-the-job accidents.

Simple Records Needed

Records of accidents should be detailed enough to give a complete history of the incident. "Broad enough and adequate for the job we're shooting at," was the way one panel member put it. "It is our plan to list periodically the types of accidents which our people are having off the job," he explained. "We find as a general rule," he said further, "that the

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NOW *drilling*

This advertisement appeared in 1941

its 55th well

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severity of off-the-job accidents is not as great as on-the-job accidents." Going back to the matter of records, he said "We are hoping to bring to the attention of our field people the types and how they happen, and some little history of accidents, to give the foremen an opportunity to discuss this off-the-job accident problem."

Simplicity should be the fundamental of record keeping, according to Bonsib. The records should be simple and very much to the point. First-aid men in plants, or an employment man who keeps records of absentees, can act as a good source of facts in keeping a set of records. Very little progress in reducing off-the-job accidents can be expected, in Bonsib's opinion, until thorough records of such accidents become a routine part of a company's activities.

It was observed in the discussion that in one company 20 percent of the time lost from so-called off-the-job accidents did not occur to the employe himself, but to some member of the family.

Safer on the Job

That the points made in the discussion panel are well taken is verified by figures taken from actual company records. In the current issue of "Accident Prevention Information," published by the Department of Accident Prevention, American Petroleum Institute, under the title, "Take Safety Home With You," figures taken from Humble Oil & Refining Company are quoted. For the first nine months of 1944 that company showed 413 non-industrial (off-the-job) accidents resulting in 5465 days lost. For the same period there were 181 industrial (on-the-job) injuries, or nearly 43 percent fewer than there were non-industrial accidents. "This would seem to indicate," it is observed, "that workers are considerably safer on the job than at home." Time lost from both types of accidents was approximately the same number of days.

NON-INDUSTRY ACCIDENTS FOR 1944

Cause	No. Cases	Days Lost
Amputation	1	1
Animal	25	434
Athletics	11	125
Auto	67*	1354
Burn	15	184
Concussion	2	13
Contussion	39	271
Cuts and Bruises	43	315
Dislocations	6	31
Fall	37	457
Fight	18	282
Foreign Body	28	210
Fracture	37	1090
Gun	2	54
Heat Exhaustion	1	12
Hernia	1	18
Insect	2	17
Poison	1	4
Puncture	5	26
Shock	1	65
Sprain	44	224
Strain	25	260
Tools	2	18
Total	413	5465

* One of these accidents was fatal.

Fundamental Research Bulletin of API Ready

The American Petroleum Institute, 50 West 50th Street, New York 20, has published its annual report on the progress of fundamental research in the petroleum industry for 1943, covering occurrence and recovery of petroleum. The volume is available to the public on a subscription basis upon application to the Institute.

Ratable Taking of Gas

■ CONTINUED FROM PAGE 22

nizing that one owner in converting his portion of the reserves to possession might obtain more, to the detriment of others. It held that the legislative power of a state can be manifested for the protection of all the collective owners by securing a just distribution, to arise from the enjoyment, by them, of their privilege to reduce to possession, and to reach the like end by preventing waste.

In many instances lawyers say the courts have assumed that waste prevention is the only device that a state may use to accomplish a just distribution. In the Ohio Oil Company vs. Indiana case the Supreme Court did not say so but on the other hand emphasized that its basic concern was a just distribution and certainly implied that the state could attempt any means of accomplishment that bore a reasonable relation to the result to be accomplished. This was in Indiana, where gas is not owned until reduced to possession. Certainly Texas should be able to act to reduce drainage, since in this state ownership of gas in place is recognized.

Limited Power

However, it was believed that the state's constitutional power to allocate production to accomplish a just distribution is limited to well owners. It would be unfair to allocate a portion of the production to tracts whose owners have been unwilling to risk expenditures involved in drilling for the gas.

The attempt to accomplish just distribution among producers of gas in common reservoirs located in Texas has thus far met with complete failure, according to competent lawyers. The operators in some fields have resorted to voluntary unitization which has been invariably successful. Suppose a field is not unitized. In the Corzelius case now pending in the Texas Supreme Court involving attempts by the commission to destribute the market demand for the gas among the wells of Corzelius and Harrell, the regulatory body was prevented from enforcing an order prorating the gas inasmuch as the question of physical waste within the reservoir did not apply. It was not possible to prevent gas withdrawals from one well on a 79-acre tract from creating drainage from the rest of the field as long as total withdrawals did not amount to more than the figure agreed upon as being the most which could be taken from the field without causing waste. Apparently the United States Supreme Court has upheld the right of the states to legislate to the end that there be a just distribution of production throughout a field.

Another attempt by the commission to order ratable production was defeated in the Consolidated vs. Thompson case, often cited in court battles over gas proration. This particular case was in reality one which would have worked a hardship, as it was shown that the defendant would have been forced to restrict his production at a time when he was already being drained, which would have served no purpose of justice. The higher court decided the case upon the assumption that the state had power to issue a ratable production order independently of waste in order to accomplish a just distribution. Justice Brandeis said:

"We assume, also, that the state may constitutionally prorate production in order to prevent undue drainage of gas from the reserves of well owners lacking pipe line connections. If proration were lawfully applied for any such purposes, the fact that thereby other private persons would incidentally and gratuitously obtain important benefits would present no constitutional obstacle. And the fact that plaintiff's gas is to be sold in interstate commerce would not preclude such exercise of the state's power."

Common Purchaser

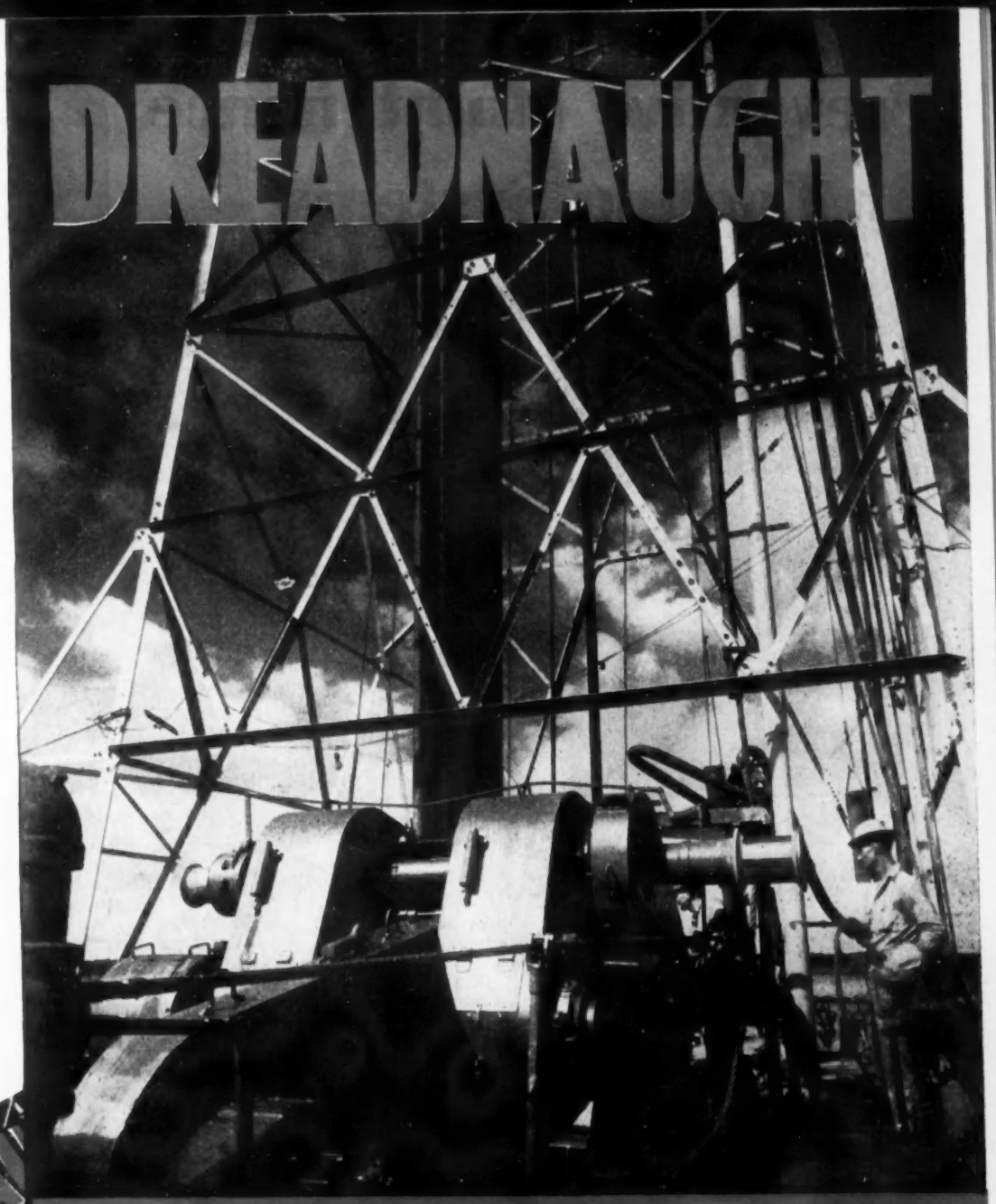
Another method of trying to allocate withdrawals in an equitable manner is through the common purchaser provisions written into the Texas statutes. Operators say this effort to compel a transmission company to purchase from others is prompted by the desire to give every well owner an equal right to produce his reserves. However, a three-judge court in the case of Texhoma Natural Gas Company vs The Commission struck down ratable purchase orders on the ground that the statute under which they were written is invalid. This statute had the unconstitutional design to divide private markets as its objective, according to most interpretations, rather than to assure a just distribution of gas from the producers in a common reservoir. In any event, granting proper constitutional basis, common purchasing would not be thought enforceable without power on the part of the administrative agency to fix field prices for gas. A field purchaser could defeat this program by offering an operator from whom he did not desire to purchase a price at which the producer could not afford to sell. There must be a willing seller as well as a willing buyer. It was believed to be constitutionally sound far a state to compel a transmission company to purchase ratably from all well owners in a common reservoir, including production from its own wells, as long as a price is specified at which everybody's gas must be purchased; provided further that the purchaser himself is not suffering drainage at the time he is required to purchase from others.

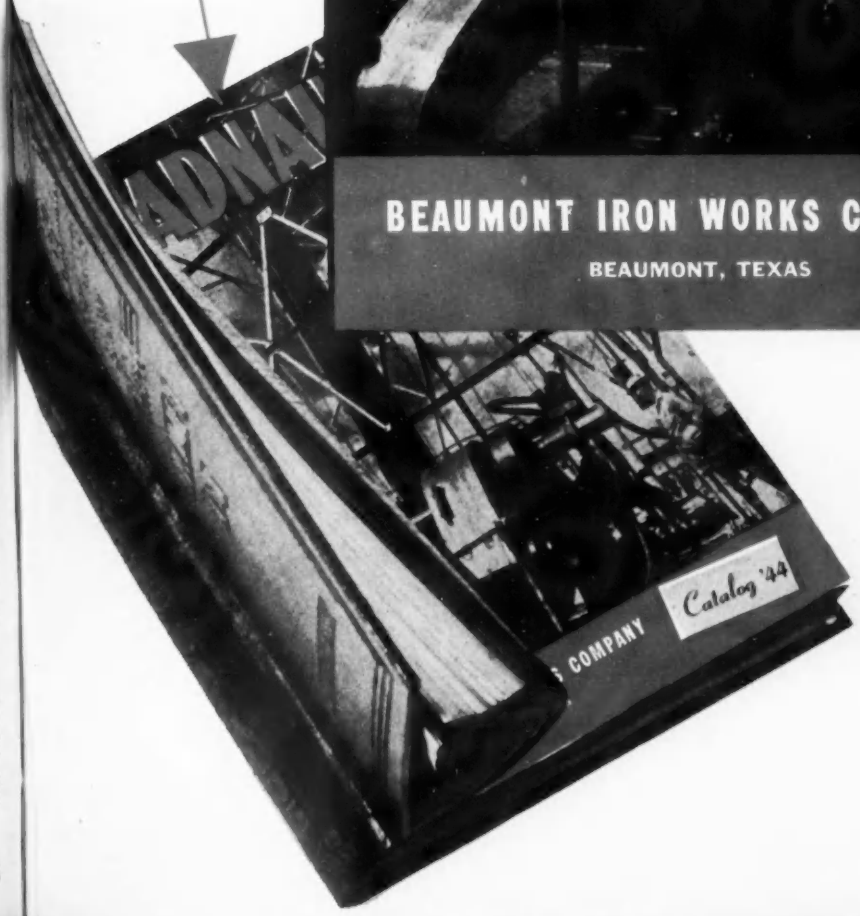
Related to this problem is the question of the purchaser's obligation to construct pipe line connections to a producer. It is doubtful that a state can force such action, and the survey indicates any common purchaser statute should require that the producer construct his own system to deliver his own gas at a point convenient to the purchaser, with reasonable provisions as to quality and pressure.

This discussion has been made in an effort to bring out most of the basic advantages and disadvantages of ratable taking of gas production. No effort has been made to go deeply into either side of arguments on unitization, either voluntary or compulsory. Many expressed themselves as heartily in favor of unitization as a means of removing at one stroke, most of the serious difficulties encountered in instituting an equitable program of ratable taking.

One thing is certain. Gas production, transmission and use is daily growing in importance. What ever the problems may be, their proper solution quickly and with a minimum of bungling is highly desirable to the industry and consumers.

Here it is in your 1943-1944 COMPOSITE CATALOG Volume 1 Pages 425 to 444





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Preventive Maintenance On Cooling Systems

JOE A. HUITT, Superintendent of Shops
Deep Rock Oil Corporation

THIS article will deal primarily with a few fundamental principles pertaining to care of cooling systems of oil field multicylinder pumping engines. Keeping an engine running at the proper temperature is far more important than the average individual realizes. "An ounce of prevention is worth a pound of cure." If an engine gets too hot, any of the following things may happen to it:

1. Cracked cylinder head or block.
2. Cylinder head or sleeve gaskets damaged.
3. Sticky or burnt valves and rings.
4. Wear or damage to bearings, pistons, and cylinder walls.
5. Engine seizure.
6. Formation of deposits.
7. Increase in corrosion.
8. Breakdown of lubricating oil.

If the engine runs too cold, the following things may happen to it:

1. Formation of sludge.
2. Sludge may clog oil lines and piston ring grooves.
3. Clogged oil lines will cause
   a. Burned out bearings
   b. Ruined crankshaft
   c. Scored pistons and cylinder walls.

Much engine trouble can be traced back to failure of cooling system to keep engine operating at proper temperature. Due to the fact that the damage does not always show up immediately, many operators are not able to determine the exact cause of the trouble, and thus may make the same mistake again.

Perfect Cooling Needed

To avoid the above mentioned trouble, the cooling system must be kept in perfect condition, like new, at all times. This can be done in most cases and will pay dividends. Preventive maintenance of this part of the engine has not kept pace with other parts. The cooling system is made up of the following:

1. Radiator.
2. Block or water jacket.
3. Fan.
4. Fan belt.
5. Water pump.
6. Radiator hose.
7. Heat indicator.
8. Water temperature protective control switch.
9. Radiator cover.
10. Thermostat.
11. Liquid cooling agent.

Parts of the cooling system will be discussed in the reverse order as listed above.

Water and anti-freeze are used as cooling agents. One of the first things to be considered in putting an engine into operation is the kind of water to be used. Operators have been particular about oil for a long time. Bad water

FIGURE 1
Examples of overheating. Burned valves above and, below, scored piston.

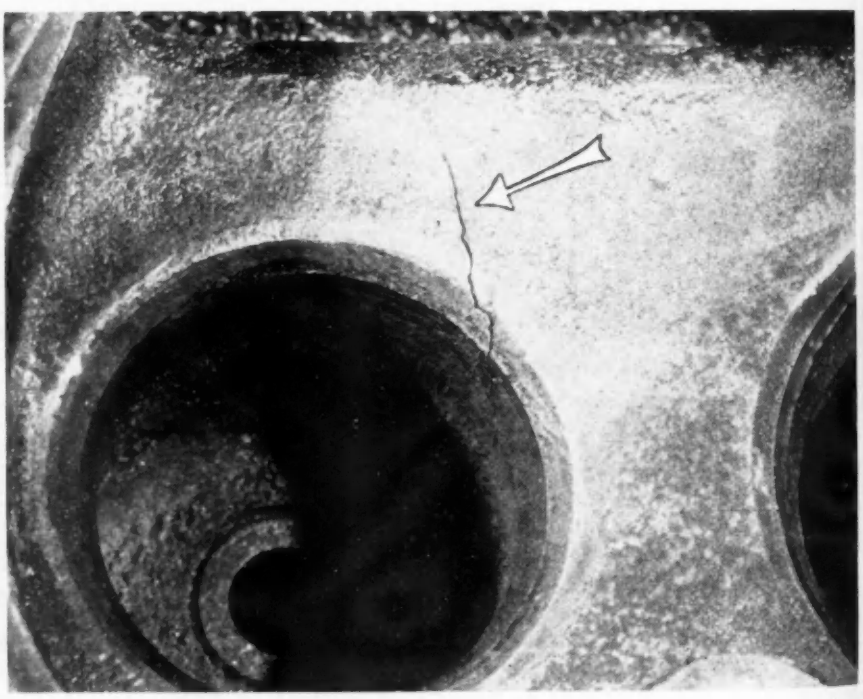

FIGURE 2
Another example of overheating—a cracked block. Never add water to an overheated engine until it has cooled.
Photo courtesy National Carbon Company, Inc.

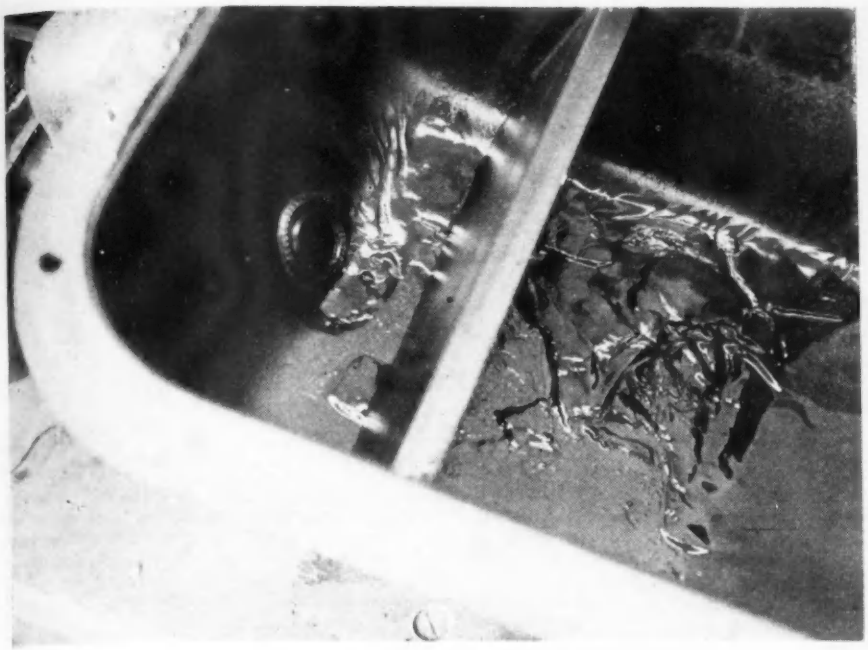

FIGURE 3

Operating an engine at too low a temperature produces sludge as shown in bottom of oil pan. Some of this sludge will be circulated through line and bearings and trouble is inevitable.

may cause engine failure about as quickly as a poor grade of oil. Too many field men believe than any kind of water, if it looks good, is all right to use in a cooling system. This has caused much unnecessary expense. Even small amounts of water from ponds, slush pits, creeks or from rusty field lines may cause damage to a cooling system. Water may look reasonably clear yet still have much sediment in suspension which settles out in the engine block and radiator, and too soon the cooling system is clogged and the efficiency of the engine impaired.

Even Cylinder Temperature

The cylinders of an engine should be kept at uniform temperature under all conditions. If certain passages in the cooling system become clogged with rust or corrosion, there will be hot spots in the cylinder walls. Hot spots are indicated by the boiling sound after the engine is stopped and will cause distortion in the cylinder. This causes wear on the cylinder wall and piston rings cannot function properly in a distorted cylinder.

Water taken from pits or ponds may be salty or of an acid condition. Hard water may leave a scale in the cooling system. Some operators put up eave troughs on lease buildings and catch rain water for use. This water is the best, if it is provided with rust inhibitor. Rain or distilled water may contain so much oxygen which will cause corrosion unless a rust inhibitor is used.

People have become accustomed to using water from many sources in automobile and truck radiators. This is necessary because the vehicle moves around. The pumping engine is stationary and we have absolute control over the source of water. It will pay dividends to haul water to the engine rather than have the wrong kind used in it. Clear water, free from sediment, and of the correct pH (acid or alkaline) condition with a rust inhibitor in it, is usually all right. The standard anti-freeze solutions come with a rust inhibitor. However, this inhibitor may break down if used longer than one winter. In that case inhibitor should be added.

Use Inhibitor In Summer

The summer months are more conductive to rust in the cooling system than any other time. The thermostat is open wider and there is more turbulance in the cooling system which causes entrainment of air and thus increased oxidation. When rust is noticeable in the cooling system, the water should be drained, the system flushed, and new water with inhibitor added. It is a good policy to flush radiators with a good chemical cleaner at least once or twice per year. There are several good brands on the market.

Even if good water is put in the radiator, it should be checked frequently for clearness and with litmus paper for the pH (acid or alkaline) condition. Exhaust gas leakage into the cooling system will cause the water to become acid. If the water tests less than pH8, it should be changed or treated. There are several good brands of inhibitor which neutralize an acid condition and also prevent rust and corrosion.

To prepare the system for anti-freeze, the system should be completely drained by opening all drain cocks or plugs on both engine and radiator. Make certain that system is clean and tight. Every part should have a thorough inspection around the fall of the year. Check when engine is cold for small leaks. It is good practice to pour in some water followed by the anti-freeze and then finish filling the system with water. The mixing of different brands of anti-freeze in the cooling system should be limited to those having the same basic materials. Mixtures of ethylene glycol with ethanol alcohol cannot be correctly tested with a commercial anti-freeze tester.

The three most commonly used types of anti-freeze solutions have either a methanol, ethylene glycol, or ethynol base. Methanol anti-freeze contains methyl (wood) alcohol and ethynol contains denatured ethyl (grain) alcohol. The permanent type anti-freezes contain ethylene glycol. Figure 5 shows freezing point curves of these three anti-freeze solutions.

Watch the Water Level

All have been educated to watch the oil level in the engine. It is about as important to watch the water level for this tells whether or not everything is well with the cooling system. There will be a very small loss of water due to evaporation and the operator can soon learn how much this is. Any ather loss calls for an examination to determine the cause.

Loss of water from the cooling system may be caused from outside leaks as follows:

1. Radiator.
2. Water pump.
3. Radiator hose.
4. Head gasket.
5. Thermostat and pump housing.
6. Freeze plugs.
7. Cracked head or block.
8. Overflow due to air or gas in cooling liquid.
9. Drain cocks.

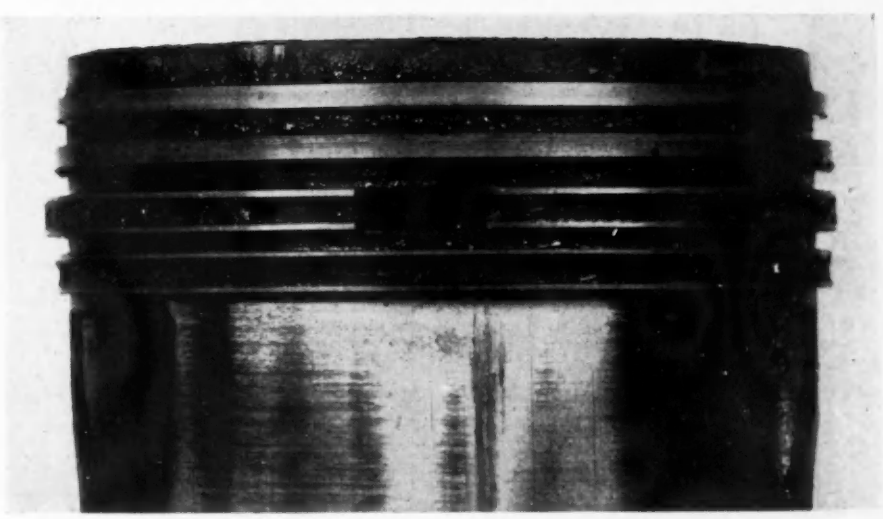

FIGURE 4

Another example of too low an engine temperature. Sludge fills piston ring grooves and destroys usefulness of rings.

Photo courtesy Quaker State Oil Refining Corporation

10. Cracked engine casting.

Loss of water may be caused from inside leaks as follows:

1. Loose or defective cylinder head gaskets.
2. Leak around wet type cylinder sleeve.
3. Cracked block or head.

The water level should be checked with the engine not running so that any air in the liquid will be expelled and the liquid level will be constant. In adding water, the operator should keep in mind that warm water expands and takes up more room. Therefore, anti-freeze will be wasted if the radiator is filled to the top because when the liquid becomes hot, there will be expansion and consequently a loss through the overflow pipe. One can soon learn by observation the amount of expansion which takes place as the water in the engine reaches the operating temperature. It is sufficient to keep water level well over top of radiator tubes.

Operation of Thermostat

The thermostat is another important part of the system and unless it is working properly, it is impossible to keep the temperature of the cooling system even. This temperature should be from 140 to 180° F., preferably 160°. If the thermostat is set at 160°, it prevents any of the water from circulating through the radiator until it has reached a temperature of 160°. Then the thermostat opens and permits the water to flow into the radiator. When the temperature of water in jacket drops below 160°, the thermostat begins to close.

Never operate engine without a thermostat. One can usually tell by watching the heat indicator if the thermostat is working properly. If there is any doubt, it should be removed and checked. Figure 7 shows a simple way to test.

In extremely cold weather, it may be necessary to use a radiator cover to keep the water warm enough for the weather may cool the water faster than the engine can heat it. It is usually best to have an engine facing south for benefit of breeze in summer and protection from cold in winter.

Another part of the cooling system which is quite important is the water temperature protective control switch. If this switch is operating properly, it will shut the engine down before it gets too hot. Figure 6 is a sketch of one of these instruments. It is so constructed that when the temperature of the cooling system increases to a certain degree, the expansion of metal completes a circuit which grounds the magneto and stops the engine.

An important thing to know is if this gadget is working properly and at what temperature the water has to be before it will shut the engine down. A simple way to test and adjust this instrument for temperature desired is represented in Figure 8. Another way to test this instrument is to put a cover over the radiator until the engine is hot enough to shut down and record reading on heat indicator. The objection to this method is that the engine may run for a short time at a temperature higher than desired. The cut off switch can be adjusted to work at any temperature, but is usually set to work at 190 to 200° F.

A heat indicator is as important to

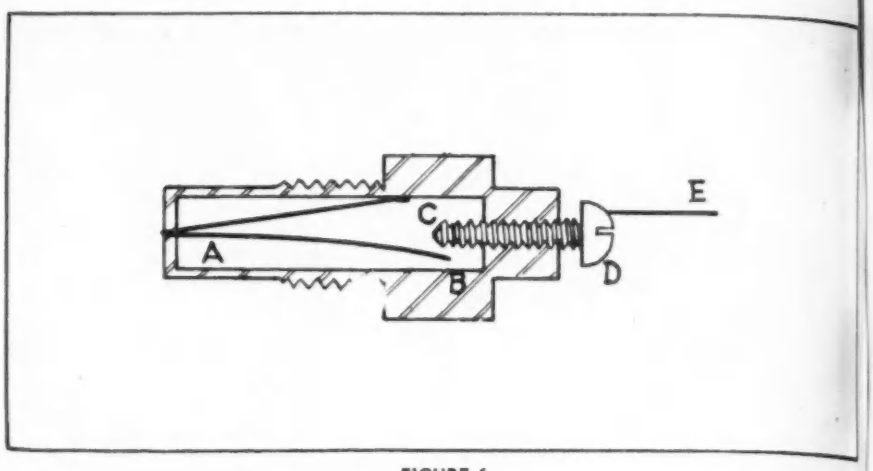

FIGURE 6

Water temperature protective switch. This unit screws into engine water jacket. A. Two wires—one affected by heat and one not affected. B. When heat is sufficient contact point B moves over against adjusting screw C which completes the circuit and creates a direct short of magneto engine. Adjusting screw C may be adjusted to shut engine down at any desired temperature. One half turn either way is sufficient for adjustment. D. Screw that holds contact wire. E. Wire to magneto. This is same principle as shorting out one cylinder by means of using screw driver to connect spark plug and cylinder head.

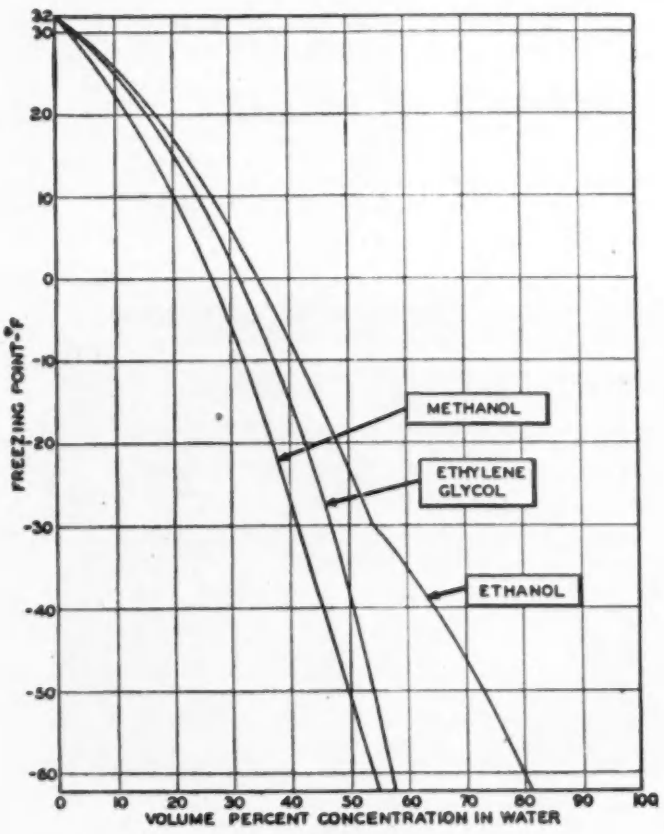

FIGURE 5

Freezing points of three common anti-freeze solutions.

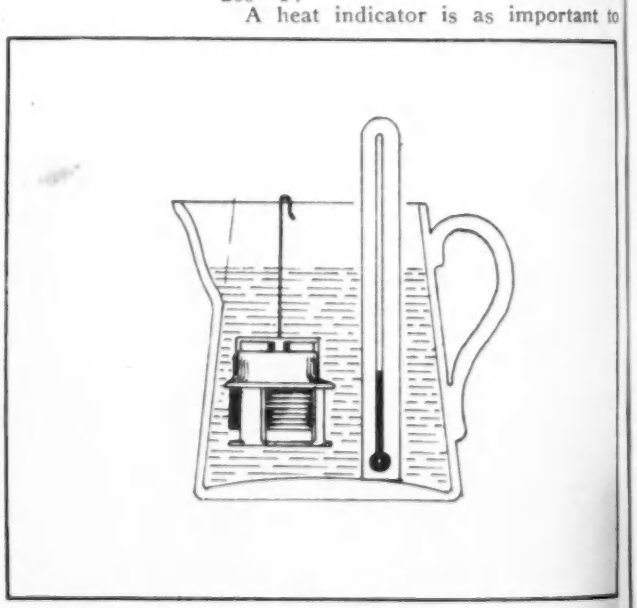

FIGURE 7

Simple way to test thermostat. Place thermostat and thermometer in a vessel filled with water. Then heat water and watch thermometer. At 160 degrees or near that reading the thermostat should open if it is in proper working order.

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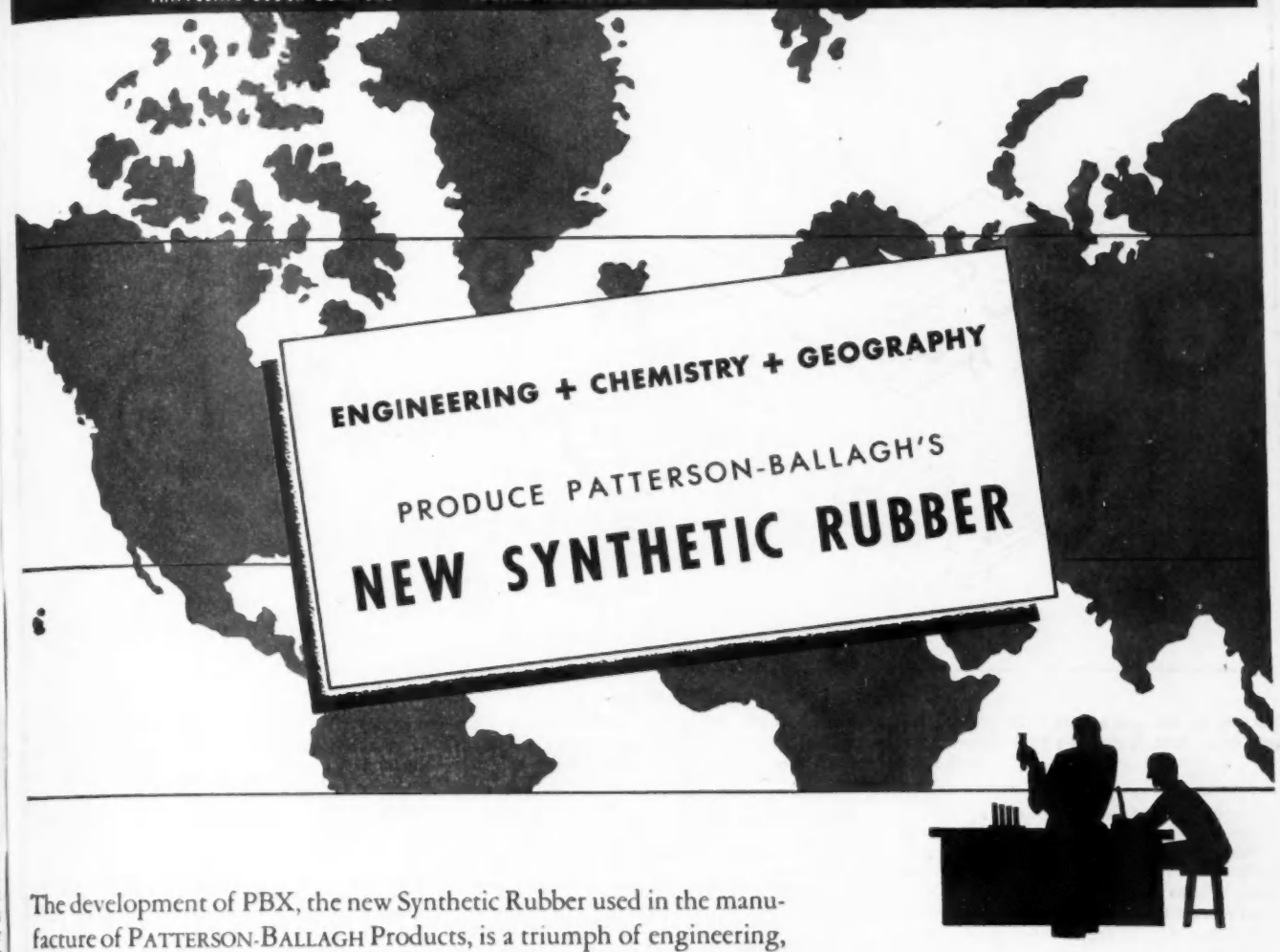

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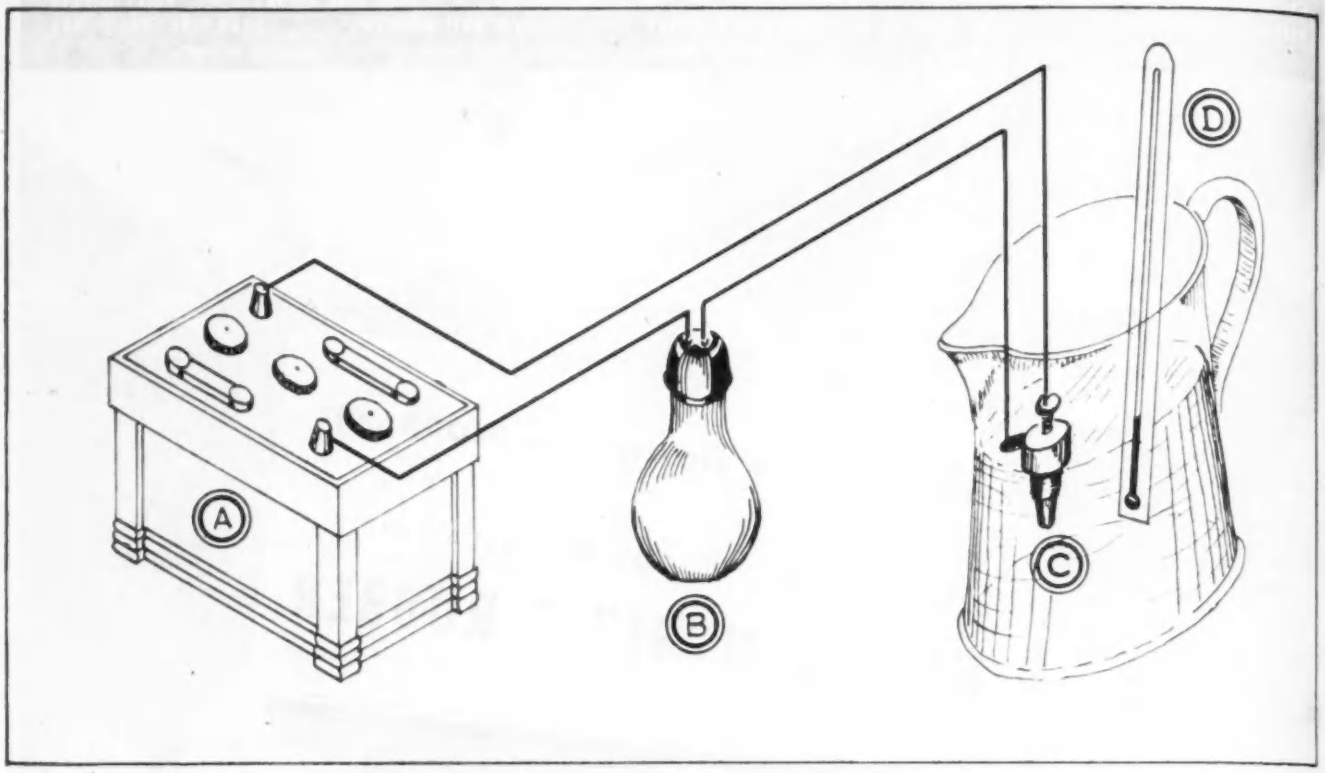

FIGURE 8

One way to test and adjust water temperature protective switch. When heat is sufficient to close circuit in water temperature protective switch the lamp burns and by reading thermometer one can tell at what temperature the switch would shut the engine down. A. Common automobile battery. B. 6.8 volt lamp. C. Water temperature protective switch. D. Thermometer.

the operator of an engine as a fever thermometer is to a doctor. Keep one on the engine at all times. It is well to check this instrument if there is any doubt about its accuracy. It is easily replaced and another indicator can be substituted for a test.

The radiator hose should be watched at all times for signs of deterioration outside or inside. The radiator hose clamps should be tightened frequently to guard against leaks. This part of the system should be thoroughly checked before anti-freeze is put in for the winter.

The water pump which is operated by the fan belt is another important feature of the cooling system. Keeping the fan belt properly adjusted is very essential because a slipping fan belt will decrease the efficiency of the water pump. A worn pump will let cooling fluid out or draw air into the cooling system. Air in the cooling system causes rust and displaces water through the overflow pipe. Instructions put out by the factory in the care and repair of water pumps should be closely followed.

Care of Water Jacket

The care of the radiator and water jacket have already been largely discussed since the principal thing is to keep them clean and prevent rust and corrosion. Radiators are expensive and difficult to obtain during war time and the prudent operator will keep this in mind. The repair of pumping engines is usually more costly than repair on automotive engines for two reasons. The engine may be in an isolated spot where it will be expensive to send mechanics to repair it or bring it in. Then there is the loss in production of oil.

This article is written largely for those who are not mechanics. Mechanics will be interested in further detail on repair to the cooling system after it starts to give trouble. The Office of Defense Transportation has issued a booklet which is very complete on the subject of repairs to cooling systems of automotive equipment as well as preventive maintenance. This may be obtained without cost and most of it is applicable to cooling systems of any type engine.

Postwar Employment Plan Is Recommended to CED

Five steps to meet the unemployment problem in the transition period of conversion from war to peace economy are recommended in a study completed for the Committee for Economic Development by Richard A. Lester, associate professor of economics at Duke University.

His five-point program recommended to meet the transition period is:

1. Unemployment compensation, as the chief means for providing for workers during the transition, should have its coverage extended and its benefits increased. Coverage should be extended to include federal agency employes, workers in federal shipyards, arsenals, etc., merchant seamen and workers in firms with fewer than eight employes. He recommends that those states which have not already done so increase their schedules to permit maximum benefits of $20 a week for 26 weeks.

2. Employers should plan postwar rehiring as far ahead as is practical, using as many employes as possible during transition on maintenance, repair, alteration and development work.

3. Short-term education and basic training courses, both general and vocational, should be available without cost to the jobless, with federal funds matching those raised for this purpose by states and localities.

4. State and local public works programs should be planned now for use when needed to provide employment. Lester recommends that the federal government match local funds to speed advance planning for such works. He maintains that a federal expenditure of $150,000,000 for this advance planning would prepare for public works to cost seven or eight billion dollars after the war.

5. Congress should enact a program of federal grants to the states for general assistance on a matched basis, similar to that used in federal-state payments to the needy aged, the needy blind and to dependent children.

Total federal cost of all these proposed measures, in a two-year period after the war, is estimated by Lester at about $1,250,000,000, the approximate government expenditure in five days of the present war period.

The report is being published by McGraw-Hill Book Company, 330 West 42nd Street, New York 18, New York.

Geologists Elect

Standford L. Rose of The California Company was named president of the Ardmore Geological Society for 1945, succeeding John Marshall of The Texas Company. Other officers include Maynard P. White, Gulf Oil Corporation, vice president; and Hamilton Johnson, Schlumberger Well Surveying Corporation, secretary- treasurer. A. J. Crowley, U. S. Geological Survey, Fort Worth, reported on his survey of the Arbuckle mountains in North and West Texas.

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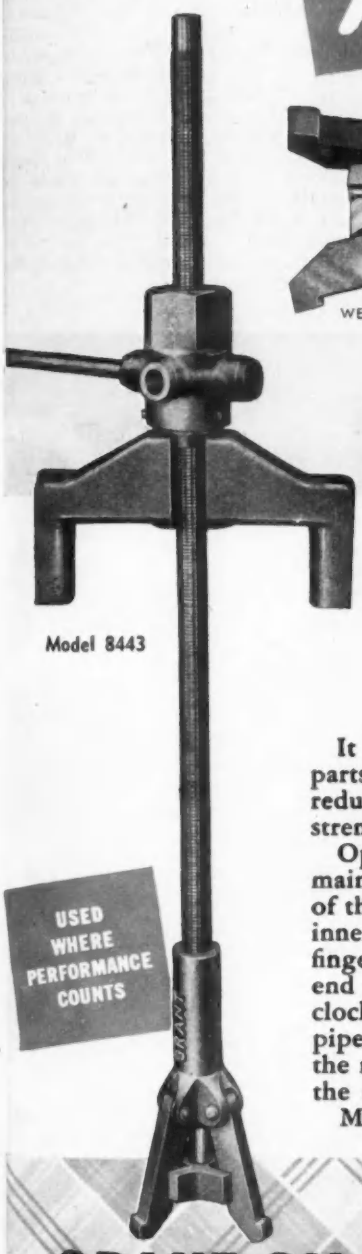

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Chain and Sprocket Locking Device Extends Life of Line

Novel installation on reel to anchor dead end of the drilling line and made of two salvaged sprockets is most practical and results in decreased expenditures

A NOVEL and highly practical means of anchoring the dead end of the drilling line was achieved by the superintendent of one company on a rig being used in drilling deep wells. Instead of merely anchoring the dead line to a fixed object involving tight loops, line clamps, etc., that end of the line was wound on a heavy reel set up at ground level on the side opposite the draw-works and there bolted to the derrick sub-structure. The means of securing the reel and line was accomplished by use of two salvaged sprockets, one of them being a small pinion, and a short length of used rotary chain, together with the aid of the welder in attaching the pinion and a bracket.

Installation Shown

In the accompanying illustration can be seen the method of installing the several parts together with the swinging enclosure which protects the larger sprocket. The small sprocket was cut in half and the half-section welded to the base of the unit, the center toothed section looking out, or away from the rig, at an angle of approximately 45 degrees from the vertical. On the side of the corner upright member of the reel support and opposite the center of the large sprocket, was welded a slotted bracket of heavy angle iron against which the tightening bolt is drawn up. The rotary chain, secured at the lower end by a bolt run through the base member on which the small pinion section is welded, is carried over these teeth, under and around the back side of the larger sprocket to where it terminates in threaded eye-bolt and a tightening device, the latter being a heavy nut having two long wings welded to it providing ample hand leverage.

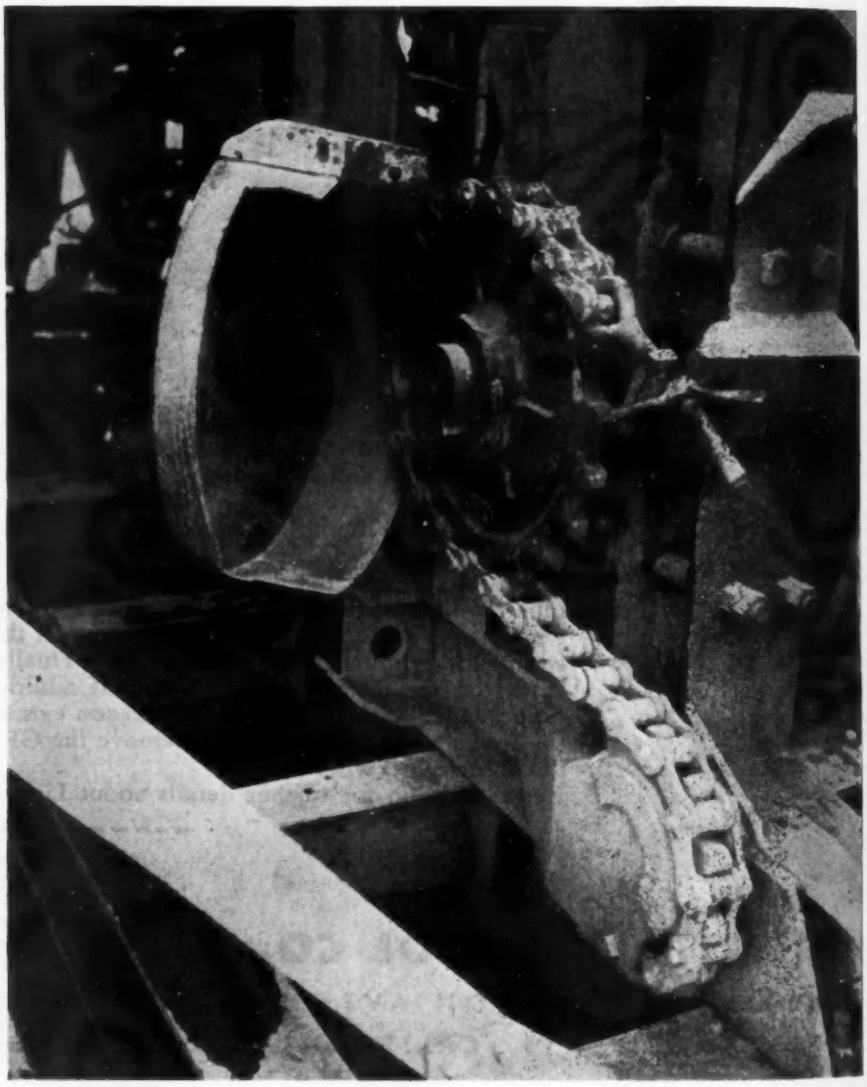
Slip-proof Anchorage

It will be seen that with the reel tending to unwind in a clock-wise direction, as seen from the pictured side, it merely tightens the grip between the two sprockets. Instead of relying on a single pin or grip on either end of the rotary chain, the multi-fingered grip of the numerous heavy teeth offers a firm and slip-proof means of anchoring the reel against any motion brought about by the pull of the drilling line. When slack on the line is desired for shifting the location of the line on the sheaves, it is a simple matter to set the hand-band brake on the other side of the reel, loosen the wing nut on the chain tightener and lay back the chain from the large sprocket, following which the reel will be free for turning. Locking the sprocket again is a matter of only a few minutes work, and should the reel be needed in some other capacity on another type of rig, no major change on the unit, other than removing the chain and larger sprocket, is necessary.

A heavy steel cover, hinged on the back or rig side, is made to enclose almost entirely the larger sprocket and locking bolt. When the cover is closed a small bolt is run through a hole in the cover bracket and into a corresponding hole in the reel framework. The cover not only keeps dust and mud splashes out of the assembly, but prevents tampering.

Lowers Expenditures

This type of dead-end anchor is bringing about increased savings in lowered drilling line expenditures. Where the old type of tie-down involving a looped line and cable clamps made it necessary to cut and discard a piece of line every time a shift was necessary, this system permits spooling or unspooling a short length, yet with no need of discarding the cable. The speed with which a shaft can be made in utilizing the sprocket locking device encourages more frequent shifting of the cable and hence a more even wear will result, causing additional service to be realized from the cable.



Safety cover over clamping sprocket on reel shaft, showing method of tigthening chain with wing nut and slotted stop. Pull of the dead line is taken through the sprocket and chain to the lower half sprocket welded to base of unit, the adjustment above being merely for taking up all slack and preventing damage or breakage through backlash under alternating stresses when line is run.

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Policy of Multiple Taxing Of Production Needs Study

Adjustments essential to give oil industry new life and to permit it to move forward and develop, government professor declares after intensive survey of Texas scrambled taxation

UNLESS both state and local communities in Texas wish to face the inexorable economic law of diminishing returns in the years ahead, a sweeping reappraisal of the policy of multiple taxing as applied to the production of crude oil is necessary. Such adjustments in taxing policy are essential to give the industry new life and permit it to move forward in new developments.

These views expressed by George C. Hester, professor of government, Southwestern University, Georgetown, Texas, are contained in Public Affairs Research Pamphlet No. 5, published by the Department of Government, at Southwestern University. Under his discussion of a "Legislative 'Green Light' for Industry," Hester dwells on the effects of "scrambled taxation," and notes that the Texas oil industry has "experienced the fortunes of circumstance as variable as the Texas seasons."

"Back in the good old days of flush production from newly discovered fields," he writes, "boom towns arose, and school, road, and other public improvements were built. Taxable values rose rapidly, and as a rule, great bond issues were floated. Under flush production, the per-unit cost of the tax load was not burdensome. It was under such circumstances that the whole theory of higher oil taxation, both state and local, was conceived in Texas.

Tax Load Sticks

"Then the picture began to change. Hardly had the bond issues gotten cold in many areas before rapid production declines set in. Soon the once productive areas were interlaced with stripper wells, struggling to maintain even a margin of profit. Yet the over-all local tax load stuck fast, while the state was increasing its production taxes."

The penalty soon began to be felt by the oil industry. The principle of regressive taxation, "which works upward as production and profit margins decline, soon made it unprofitable to operate such wells." Rather than absorb new taxes which operators knew the wells would not support, the wells were abandoned. "Not that the oil was exhausted," Hester observes. On the contrary, he emphasizes that millions of barrels remained in the fields subject to salt water intrusion and obstacles to recovery. "Such widespread and premature abandonments result not only in loss of both capital and jobs, and the remaining oil underground, but in taxable values for the local communities and tax revenues for the state. The economic consequences of such a policy, when measured in permanent losses to the economic life of Texas at large, are so enormous as to be almost incomprehensible to the average citizen."

State Revenue Receipts from Oil and Gas and Allied Industries in Texas, 1940-1944 Inclusive

TAX SOURCE:	1940	1041	1942	1943	1944
Crude Oil	$ 14,652,349	$ 17,199,018	$ 23,766,316	$ 25,297,159	$ 34,459,078
Gasoline	45,947,768	51,387,096	50,059,310	40,668,511	39,770,352
Carbon Black Companies	420,383	368,238	504,897	423,469	932,241
Natural and Casinghead Gas	750,291	1,019,107	2,406,660	2,573,694	3,245,703
Oil Land Sales, Rentals, Royalties	6,327,921	4,614,778	5,645,677	9,444,442	18,838,674
Total State Revenue from Oil and Gas	68,098,712	74,588,237	82,382,860	78,407,275	97,246,048
State Revenue from Other Sources	119,311,142	127,544,152	146,686,219	167,144,166	157,459,078
Texas' Total Revenue Receipts, All Sources	187,409,854	202,132,389	229,069,079	245,551,441	254,705,126

Abandonment of more than 2500 stripper wells in 1943, at a loss of production amounting to 1,700,000 barrels, gives some idea of the losses. It is also pointed out that of the approximately 100,000 producing wells in Texas today, more than 30,000 are of the stripper class, "producing an average of 3 barrels per day and with an average profit of about 4 cents per barrel. This margin of profit is less than the state production tax alone, while there are almost a dozen other state and local taxes resting upon the same operations. Of course many of the wells in this stage of production could be saved by a reconditioning of the wells for further production. This reconditioning process however, is expensive, about $650 per well, and is rarely justified under present profit margins."

Thus the time has come for a reconsideration of the whole policy of taxation on oil if the oil industry is to move ahead in the broad advance of industrialization and economic development to be hoped for in Texas after the war.

There can be no greater hindrance to this development than punitive taxes which hang "like a Damoclean sword over private initiative, over the risk of capital in new industries, over prospective jobs for returning veterans, over the fond hopes of economic development for our State," the author reiterates.

The retarding effects of new tax threats are realized by few people, in the professor's opinion. To reinforce his argument, he cites an example of industry's reaction.

"A few years ago plans were underway for the construction of two large refineries at locations in the Gulf Coast area of Texas. Such industries pay good wages and maintain high labor standards. The Texas Gulf Coast was the logical location for such new enterprises as the great oil pipe lines converge at those points.

"Then something happened. The citizens of Texas will recall the bitter tax fights of those years. One of the revenue bills sponsored vigorously was a proposed refinery tax of one-half cent per gallon on gasoline. Incidentally, such a tax is several times the profit that any refinery can make. The threat was sufficient. The refineries, with their vast investment, and with their large payrolls, suddenly switched to Louisiana where they were constructed under tax exemption privileges for new industries locating in that state."

"Indefensible" is the only term to describe such bungling of the economic progress of Texas, says Hester. "An informed citizenry should demand that it not be repeated. The cold fact is that there is not an industry of any significance whose present tax load has not already reached the point of diminishing returns if not actual confiscation in many cases when such industries again are compelled to operate under peace time conditions."

Natural Gas Tax Rise

In reviewing the outlook in state finances, Hester notes some trends of interest to the oil industry: Gasoline taxes will rise slowly, he believes, because of car and transportation difficulties, and will eventually go beyond $70,000,000 annually. Natural gas production taxes can be expected to become one of the major revenue sources due to increased utilization of the product and to rapidly rising contract prices with which the gas is produced at the well. Production taxes on oil will drop decidedly, as much as 10 to 15 million dollars below the present large amount being secured from this source, but the increase in gasoline taxes will probably offset this loss as far as total revenue to the state is concerned.

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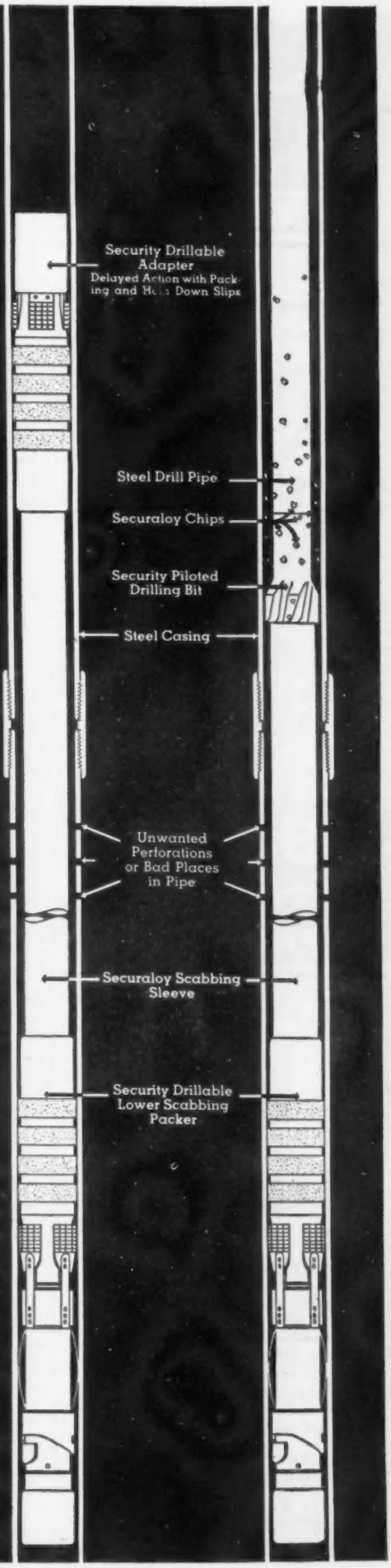
The Securaloy scab assembly illustrated at the right shows how unwanted perforations, bad places in the pipe, water strata, or high-pressure gas zones may be blanked off for CERTAIN sub-surface well control. This assembly may be cemented in to effect a DOUBLE SEAL.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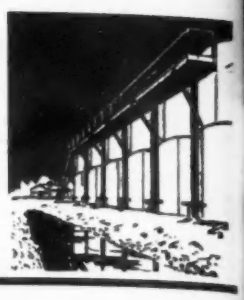
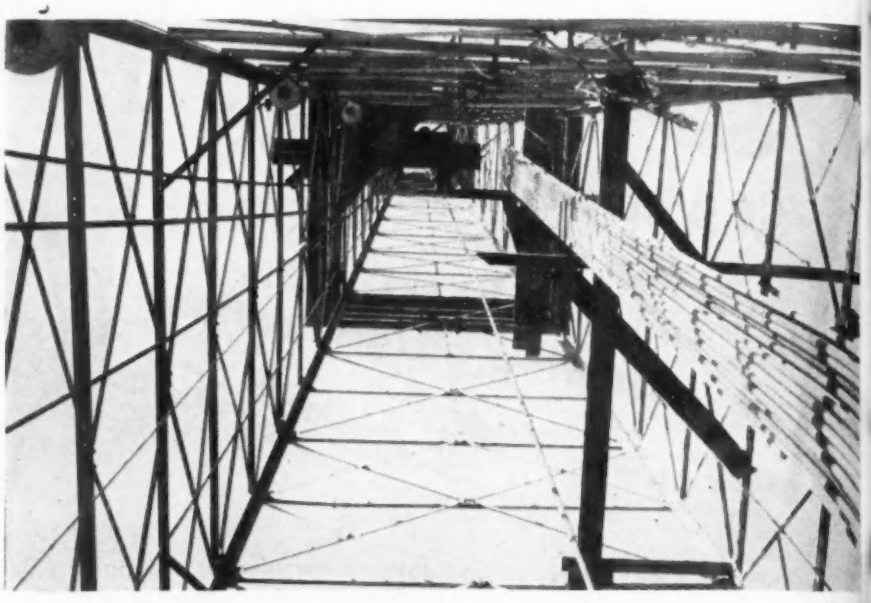


Extra Finger Board Aids Macaroni Tubing Racking

Racking a string of macaroni tubing pulled in thribbles from a deep hydraulic pump-equipped well will tax the patience and skill of any well-pulling crew if provision is not made for additional support in the middle of the racked pipe to prevent it from buckling and falling across the open derrick. One superintendent installed an extra finger board several girts up in the derrick, the board consisting of a heavy timber, well braced in the derrick, and into the side of which has been affixed a row of regularly-spaced rods between which are racked the macaroni stands. Each pair of spacers is long enough to accommodate from nine to twelve stands. The strain, therefore, on any one set of individual rods is not excessive and any tendency for lateral buckling is eliminated.

RACKING TUBING



Rigging this intermediate finger board provides additional support to long, limber macaroni string and prevents buckling and possible joint damage, as well as speeding placing in rack.

It is easy for the derrick man to guide each stand into the proper groove once the man on the floor has properly spotted his end, but to further aid him in quickly guiding it, the rods were progressively tapered so that the inside tooth last to be filled is shorter and there will be little chance for a stand to catch into any previously-filled space. The derrick man ties the upper ends of each row together with a light line and once it is lashed to the nearby girt member, there is no chance for a stand to break away.

Chain-Equipped Bracket Supports Long Load Units

Many complicated and varied types of fender racks for transporting light miscellaneous loads of tubular goods on service automobiles have been devised by field personnel, but for simplicity and efficient service, the one illustrated, built up by the welder of one company, is difficult to improve. It consists of a light piece of steel bent into a 90-degree angle and riveted or bolted to the top of the fender.

EQUIPMENT HANDLING

A light chain, one end secured by looping a link through a hole cut into the outer edge of the horizontal portion, is the means of holding the load in place. A narrow slot cut vertically into the upper edge of the vertical part provides the adjustable locking feature that makes this rack so versatile and handy to use. When the chain is pulled taut over the load and locked in the slot, the loose end is brought back under an edge of the rack. The tighter the strain on the chain, the tighter it will be held in place.

The ordinary miscellaneous load, such

Riveted to fender with back-up plate to distribute load, this chain and bracket support load.

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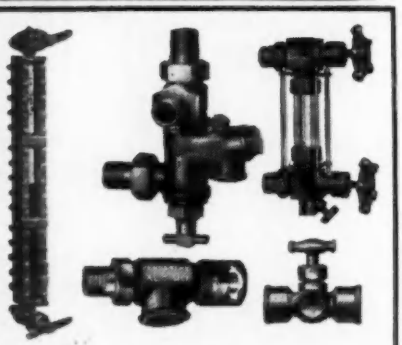
PRODUCTS



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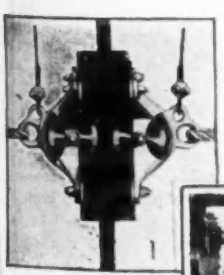

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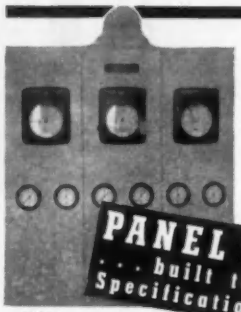

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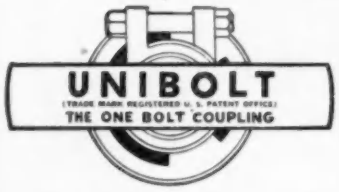

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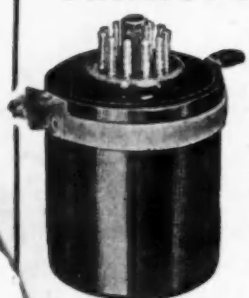

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as pump barrels, light fishing tools or several joints of tubing are easily carried on this rack, and in fact any load which the fenders could support without going to the trouble of installing elaborate strengthening members and braces.

Elevated Exhaust Quiets Single-Cylinder Pumper

Long pipe cools exhaust and absorbs much of pulsation present in one-cylinder engine use.

PUMPING ENGINES

In order to muffle as much as possible the sharp barking exhaust of single-cylinder engines on his pumping wells, one operator provides a long extension of 2-inch pipe on the atmosphere side of the muffler. Ordinarily such engines have their baffle-plate exhaust outlet mounted only a few feet from the engine itself. In this modified installation a short extension leads into a buried cylindrical muffler made from a short length of casing and a 20-foot length of 2-inch pipe is connected into an elbow and raised in a near-vertical position as illustrated.

In town-lot areas where this installation is used excellent results have been obtained in curbing excess noise which has in the past led to complaints by neighbors. The diminished impluses escaping past the buried muffler, on being exhausted some distance up in the air, are further dissipated and due to the height are not apt to cause echoing and re-echoing from buildings.

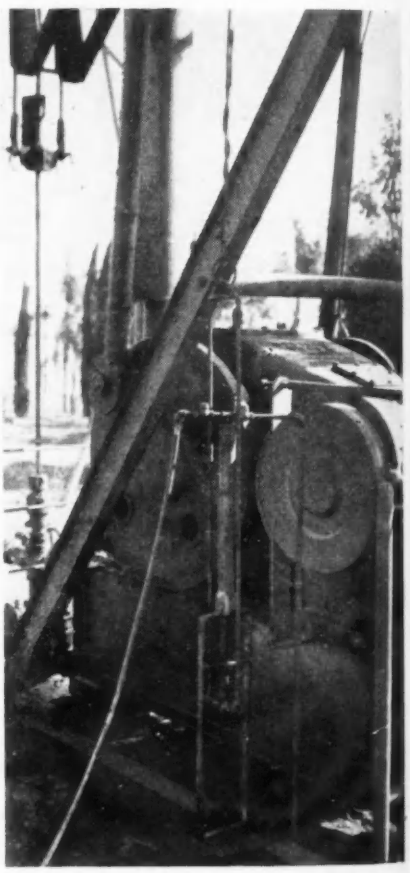
Beam-Powered Compressor Handles Engine Gas Supply

Finding it necessary to develop an inexpensive means of compressing fuel gas to be used for their gas engine-powered pumping units, one company devised a small pump that derives its power from the motion of the walking beam. It consists of an inverted cylinder and piston having brackets attached with which it is affixed to the pump unit base. Simple line check valves serve as intake and exhaust valves, the latter located on the top of the assembly as shown in the illustration.

GAS FUEL SUPPLY

An outside yoke extends down to the lower end of the piston where it is attached to a short cross-arm. Compression stroke is made on the upstroke of the beam, the weight of the piston and yoke assembly being sufficient to cause the piston to drop on the downstroke.

The assembly is easily attached to or detached from any pumping unit, the pump being bolted to a steel plate attached to the base of the well unit, and a wire line extending from the pump yoke up to the walking beam.



This pump draws lean gas from line and compresses it for use as fuel in engine driving unit.

$5.00 is paid for each illustrated acceptable contribution. Mail to The Editor, THE OIL WEEKLY, P. O. Box 2608, Houston 1, Texas

Production and Refinery Runs of Crude Approach All-Time Peaks

Both production and refinery runs of crude oil were near all-time peaks in the week ended January 27, and refinery output of the major products was greater than in the previous week. But demand for the products continued very great, and in spite of the large production, there were large withdrawals of residual and distillate fuel oil from storage, and gasoline stocks also were drawn upon by about 500,000 barrels.

U. S. production of crude averaged 4,727,000 barrels daily, down by the slight amount of 6000 daily from the week before but 318,000 a day or 7.2 percent above the runs of 4,409,000 daily in the corresponding week a year ago.

Crude runs to stills at all United States refineries averaged 4,756,000 barrels daily, up 80,000 from the previous week and 392,000 daily or 9 percent above the runs of 4,364,000 daily in the week ended January 29 a year ago.

Stocks of refinable crude oil in the United States totaled 221,628,000 barrels as of January 20, the Bureau of Mines reported. That was an increase of 514,000 barrels within the week ended on that date, but still was close to a 23-year low and was 17,186,000 barrels or 7.2 percent less than the 238,814,000 barrels an hand January 22 a year ago.

Production of gasoline, including natural blended at refineries, averaged 2,177,000 barrels daily in the week of January 27, an increase of 58,000 from the previous week's rate and 238,000 daily or 12.5 percent more than output in the like week a year ago. Stocks of finished and unfinished gasoline were reduced at the rate of 70,000 barrels daily during the week and then totaled 88,223,000 barrels. That quantity was, however, 7,138,000 barrels or 8.8 percent more than the 81,085,000 barrels in storage January 29 a year ago, as reported at that time by the American Petroleum Institute.

Gas oil and distillate fuel oil production, in averaging 692,000 barrels per day in the week of January 27, was up 37,000 barrels from the previous week and 92,000 a day or 15.4 percent above output in the like week a year ago. Stocks of these light fuel oils were reduced, under heavy seasonal demand, by 199,000 barrels daily, having declined to 33,651,000 barrels. That amount was 3,600,000 barrels or 9.7 percent less than the inventory of 37,251,000 barrels reported as of January 29 a year ago.

Residual fuel oil production of 1,322,000 barrels daily in the week ended January 27, was 24,000 a day more than in the previous week although 79,000 a day or 6.3 percent less than output in the like week a year ago. Stocks of residual were drawn upon at the rate of 205,000 barrels per day during the week, having decreased to 51,119,000 barrels. That total was 1,861,000 barrels or 3.5 percent less than the 52,980,000 barrels reported for January 29 a year ago.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.
(All figures in thousands of barrels—add 000)

HIGHS AND LOWS OF RECENT YEARS

ITEM	Crude Oil Prod. Barrels Daily	Crude Oil Prod. Week Ended	Runs to Stills Barrels Daily	Runs to Stills Week Ended	Crude Stocks Barrels	Crude Stocks Week Ended	Gasoline Stocks Barrels	Gasoline Stocks Week Ended	Gasoil and Distillate Stocks Barrels	Gasoil and Distillate Stocks Week Ended	Residual Fuel Oil Stocks Barrels	Residual Fuel Oil Stocks Week Ended
Highs:												
1941	4,337	11-22	4,120	10-18	266,187	3-29	99,727	3-29	[5]54,983	11-15	102,448	1- 4
1942	4,337	2- 7	3,961	1- 3	263,208	3-28	[1]109,281	3-14	47,861	11-14	95,857	1- 3
1943	4,436	11-13	4,331	12- 4	245,752	5-29	94,159	3-20	47,187	11-27	72,881	1- 2
1944	[4]4,762	9-30	[4]4,798	12-30	240,992	1- 1	89,162	4- 1	48,863	10-28	64,644	10- 7
Lows:												
1939	[3]1,601	8-26	3,125	2-18	[2]229,127	10-12	71,152	10- 7	20,722	4-15	105,397	4- 8
1941	3,364	1-11	3,490	1-18	240,399	11-15	79,923	10- 4	28,382	4-12	90,914	7-12
1942	3,297	7- 4	3,393	5-23	231,896	12-12	75,934	12- 5	29,240	4-25	72,962	12-26
1943	3,821	1- 9	3,579	3-13	232,191	1- 9	68,182	10-16	30,732	4- 3	57,596	12-25
1944	4,357	1- 1	4,228	2-12	[4]220,623	9- 9	76,302	1- 1	30,232	4-29	49,737	3-18

TRENDS OF 1944 AND 1945

Trends in Week Ended:	Crude Oil Production Daily	Crude Oil Runs to Stills Daily	Crude Oil Stocks Week End	Gasoline Production Weekly	Gasoline Stocks Week End	Gasoil and Distillate Production Weekly	Gasoil and Distillate Stocks Week End	Residual Fuel Production Weekly	Residual Fuel Stocks Week End
1943:									
January 2	3,871	3,734	233,938	10,957	82,420	4,285	42,913	7,683	72,881
January 30	3,826	3,698	233,863	10,339	88,830	3,888	37,057	7,452	70,763
February 27	3,873	3,709	235,217	10,566	93,157	4,230	32,939	7,839	70,140
March 27	3,896	3,742	239,126	10,231	94,079	3,541	30,980	8,018	67,938
April 24	3,913	3,737	242,035	10,583	91,001	3,954	31,142	8,168	67,455
May 29	3,970	3,679	245,752	10,656	83,937	3,798	32,274	7,672	67,582
June 26	3,955	4,015	242,657	11,092	79,589	3,876	34,044	8,126	67,960
July 31	4,133	3,788	238,420	11,127	74,977	3,765	36,363	8,478	66,877
August 28	4,196	4,227	236,170	12,420	72,525	4,351	37,928	8,732	67,250
September 25	3,344	4,156	233,013	12,206	70,024	4,608	40,328	8,560	66,659
October 30	4,383	4,176	247,219	12,813	69,297	4,642	44,591	7,968	63,833
November 27	4,414	4,261	239,761	12,638	69,980	4,379	46,187	8,633	62,143
December 25	4,363	4,185	241,310	12,597	74,024	4,457	43,791	8,689	57,596
1944:									
January 1	4,357	4,453	240,992	13,192	76,302	4,575	42,310	9,141	57,330
January 29	4,409	4,359	240,251	13,427	81,085	4,054	37,266	8,889	52,857
February 26	4,423	4,377	237,137	13,183	85,248	4,558	33,766	8,952	51,387
March 25	4,385	4,443	236,285	13,362	87,287	4,979	31,319	9,013	51,669
April 1	4,383	4,435	234,667	13,824	89,162	4,450	30,530	8,367	51,326
April 29	4,431	4,300	235,342	13,126	88,462	4,284	30,236	8,398	49,985
May 27	4,514	4,532	234,423	13,502	86,468	4,702	32,035	8,568	49,812
July 1	4,587	4,638	228,860	14,052	83,559	4,496	35,360	8,872	52,235
July 29	4,608	4,627	225,112	14,115	82,665	4,833	38,135	8,900	56,280
August 26	4,667	4,698	222,931	14,112	80,740	4,566	41,453	8,680	59,830
September 30	[4]4,762	4,775	222,393	14,494	78,028	4,622	45,329	9,292	64,226
October 28	4,740	4,658	223,235	14,117	79,058	4,772	48,705	8,985	64,382
December 2	4,712	4,693	221,591	14,853	80,426	4,082	45,832	8,981	61,727
December 9	4,704	4,552	220,258	14,611	80,880	4,056	44,436	8,923	60,458
December 16	4,695	4,537	222,075	14,145	82,747	4,353	42,413	8,727	59,280
December 23	4,729	4,682	222,575	14,635	83,355	4,605	40,846	8,798	58,509
December 30	4,705	[4]4,798	222,998	15,342	86,614	4,257	39,495	9,156	57,430
January 6, 1945	4,678	4,656	220,331	14,472	86,616	4,533	38,298	9,092	56,074
January 13	4,722	4,570	221,114	14,139	87,814	4,408	36,410	8,993	54,207
January 20	4,733	4,686	221,628	14,554	88,708	4,586	35,041	9,082	52,554
January 27, 1945	4,727	4,756	.....	14,957	88,223	4,843	33,651	9,252	51,119
January 29, 1944	4,409	4,364	[5]238,814	13,294	81,085	4,196	37,251	8,700	52,980
Change:									
In week	—6	+80	+514	+403	—485	+257	—1,390	+170	—1,435
In year	+318	+392	—17,186	+1,663	+7,138	+647	—3,600	—552	—1,861
In year	+7.2%	+9.0%	—7.2%	+12.5%	—8.8%	+15.4%	—9.7%	—6.3%	—3.5%

[1] All time peak. [2] Lowest between January, 1922 and July 1, 1944. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent states. [4] Lowest since December, 1921. [5] Stocks, January 22, 1944.

Tide Water Associated Names Production Heads

L. C. Decius, vice president, has been appointed director of exploration for the Associated division of Tide Water Associated Oil Company. Decius, in the service of the company for more than 29 years, has had extensive experience in geological and exploration operations outside the continental United States as well as in this country.

F. A. Menken, manager of the geological department, has been appointed assistant director of exploration.

T. L. Wark was appointed general manager of the production department and member of the operating committee. Mark, who will be responsible for production activities in the Associated division, has been associated with the company more than 25 years, in the geological, production and engineering end of the business and in 1937 was appointed assistant vice president in which capacity he continues.

Pipe Line Review

Work Under Way on Line To Ector County Area

McVean and Roberts, Odessa contractors, have begun laying 51,200 feet of 6-inch line and 1000 feet of 4-inch for Shell Pipe Line Corporation from the Wheeler pump station to Thomas production in Ector County. The job is to be completed in mid-February.

River-Crossing Job Near Tulsa Nearly Complete

Anderson Brothers Pipe Line Contractors, Houston, expect to wind up an Arkansas River crossing job near Tulsa next week for Texas Empire Pipe Line Company, Tulsa.

The task of laying the 12¾-inch electric weld line was made extremely difficult because the contract called for the line to be below 5 feet below water level. The job has been in progress for two months.

Waskom Line Taken Up for Use in West Texas Project

Sharman and Allen, Houston contractors, have completed the job of taking up 17 miles of 8-inch crude line near Waskom, Texas, for Gulf Refining Company, Houston.

The pipe is being used in the 63-mile, 8-inch line being laid by Sharman and Allen for Gulf from the Midland tank farm to the Keystone-Ellenburger field, Winkler County. This project is about 70 percent finished, with completion due in mid-February.

Half-Way Mark Passed in Reworking Oklahoma Line

O. R. Smith, Fort Worth contractor, has begun reworking the second of two 52-mile, 6-inch crude lines from Tonkawa to Cushing, Oklahoma, for Shell Pipe Line Corporation.

The first 52-mile stretch has been taken up, worked over and relaid.

Shell to Relay Line

Bids were being received late last week for the relaying of 25.2 miles of 6-inch line from the Goldsmith and Penwell fields, Ector County, Texas, to Shell Pipe Line Corporation's pumping station near Crane.

☆

ALDEN W. FOSTER, petroleum engineer, of Pittsburgh, Pennsylvania, announces that he will resume practice after having served with the United States Army Air Forces, at 1341 Oliver Building. He will specialize in reports and appraisals.

WILLIAM H. LARKIN, JR., owner of Larkin & Company, of Butler, Pennsylvania, died at his home in Butler, on January 18.

RECONSTRUCTION FINANCE CORPORATION ACT OF CONGRESS JAN. 22, 1932

Government Owned

PROPERTY FOR SALE

Defense Plant Corporation, a subsidiary of Reconstruction Finance Corporation, has for sale a quantity of surplus pipe unused in the construction of the "Big Inch" pipeline, ranging in size from six inches to thirty-two inches in diameter, Flanges, Tube-turns and Factory bends. These items are located principally at Beaumont, Texas; Little Rock, Arkansas; Anna, Illinois; Lebanon, Ohio; Middletown, Ohio; Uniontown, Pennsylvania; Lancaster, Pennsylvania; Rahway, New Jersey and Linden, New Jersey.

For prospectus and conditions of sale communicate with War Emergency Pipelines, Inc., (which built and operates the "Big Inch" pipeline for the Government), 1420 Enquirer Building, Cincinnati 1, Ohio. Phone Cherry 6720.

Houston Firm Begins Work On Katy-Freeport Line

Anderson Brothers Pipe Line Contractors, Houston, last week set up a field office and prepared to begin work on a 79-mile, 4-inch electric weld line from Humble Oil and Refining Company's cycling plant at Katy, Texas, to Dow Chemical Company's plant at Freeport.

The line will relieve tank cars in the delivery of butane-propane-ethane mixture, a Humble by-product, to the Freeport plant. If good weather prevails, Anderson expects to complete the line in 35 or 40 days.

Pipe is to arrive February 6 or 7 and work will be undertaken from both ends of the proposed line, with field offices at Angleton and Katy.

Exporting of Oklahoma Gas to Canada Opposed

Reford Bond, chairman of the Oklahoma Corporation Commission, plans to oppose any move to export natural gas from Oklahoma to Canada and is preparing to file a protest with the Federal Power Commission against the granting of an application to the Panhandle Eastern Pipe Line Company for the construction, maintenance and connection at the international boundary over River Rouge, Michigan, of facilities for exportation of natural gas to Canada.

Bond pointed out that the applicant has large holdings in the Hugoton gas pool and that if the application was granted it would mean that gas from Oklahoma would eventually be piped out of the country to supply Canadian requirements.

Humble Lists Changes

Humble Oil & Refining Company, Houston, announces the following changes in supervisory forces of the production department:

B. H. C. Stover, district chief clerk, transferred from Katy district, Katy, Texas, to Eucutta district, Waynesboro, Mississippi.

John C. Gill, district chief clerk, transferred from Eucutta district, Waynesboro, Mississippi, to Anna district, Natchez, Mississippi.

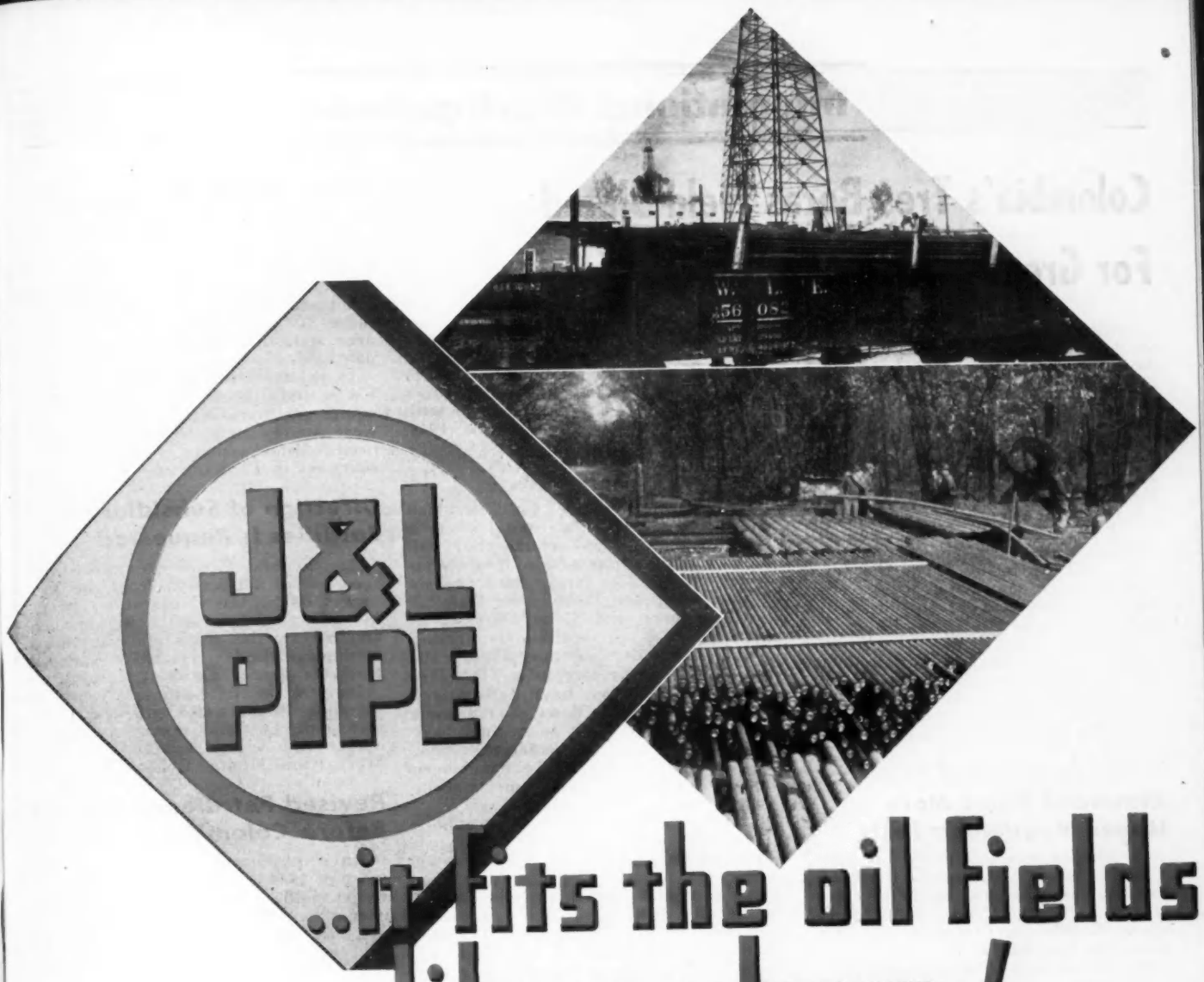
John A. Diodene, district petroleum engineer, transferred from Roanoke district, Roanoke, Louisiana, to Potash district, Pointe-a-la-Hache, Louisiana.

Ralph Finklea, transferred from Stratton district, Kingsville, Texas, to Willamar district, Raymondville, Texas, as district superintendent.

E. E. Setser, district chief clerk, transferred from Anna district, Natchez, Mississippi, to LaPorte district, Houston.

Named to Directorate

The Wickwire Spencer Steel Company has announced the election of Robert T. Dunlap as a member of the board of directors. Dunlap has been associated with Wickwire Spencer since 1943. He is also vice president in charge of production of Wickwire Spencer.



..it fits the oil Fields like a glove!

You specify J&L pipe for any oil field job for the same good reason that you want experienced, competent, conscientious men. It gets the job done.

JONES & LAUGHLIN SUPPLY COMPANY

Subsidiary of Jones & Laughlin Steel Corporation

TULSA, OKLAHOMA

J&L STEEL

Colombia's Tres Bocas Field Slated For Greater Attention During Year

While drilling up of producing acreage in the Tibu area of the Barco concession in Colombia is expected to be concentrated in the Socuavo field during 1945, several new wells will be put down in the Tres Bocas field. Colombian Petroleum Company, operators of the Barco concession, has three rigs operating at Socuavo and another at Tres Bocas, with more rigs scheduled to be put in service soon at Socuavo.

Twelve wells have been put on production at Socuavo, and two at Tres Bocas—all producing from the lower Eocene Barco pay section at an average depth of about 5200 feet. The lowest well was successfully completed last year at a location believed to be on a saddle connecting the two anticlinal domes, at least very far down structure at the south end of the Socuavo field. It is thus regarded possible that the fields will eventually be joined, and that, because of the apparent low oil-water contact, the ultimate total producing area at Tibu will be considerably greater than that of the Petrolea field, 12 miles to the southeast. The Petrolea field, with 83 producing wells at the end of 1944, is considered to be drilled up.

Tibu Area Tests

Although the plans of the Colombian Petroleum Company are not known, it seems reasonable to assume they will include thorough testing of Cretaceous zones in the Tibu area, since the six pay levels in the Petrolea field are all in the Upper and Lower Cretaceous sections. This supposition is further supported by the fact that single wells drilled into the Cretaceous at both Tres Bocas and Socuavo have encountered strong gas-distillate flows. These wells were tested and shut in without any further check of the Cretaceous pays, and no subsequent wells have been taken to Cretaceous levels, since Eocene oil sands were already proved.

It may be reasoned that since both Cretaceous wells were drilled high on structure they may have been put down within the borders of gas caps at Cretaceous depths, and that wells located farther down the flanks may tap strong oil flows at the same horizons. The fact that the Cretaceous oil from the six pays at Petrolea averages 46-gravity indicates that distillate would normally be expected in gas cap accumulations in the same zones and in the same general vicinity. The absence of an effective gas cap at Petrolea is due to the fact the entire Tertiary section has been removed by erosion from the crest of the Petrolea anticline. Every producing well in the field was started and completed in Cretaceous strata, and producing depths do not exceed 1657 feet in the field. The shallowest producing well was completed at 85 feet. A gas cap could hardly be maintained under so thin a cover, and with the active seepage outlets that were present there.

Tests Probable

Granting that the prospects are good for establishing Cretaceous production in the Tibu fields, it is probable that before additional Cretaceous tests are drilled one or both of the shut-in gas-distillate discovery wells will be studied and tested, for appraisal of all possible producing levels within the Cretaceous series. It may then be found that good oil pays are also present in association with the gas sands, and that their failure to yield substantial oil flows may be due to pressure differential factors that could be overcome by appropriate completion techniques, particularly the shutting off of gas sands, as well as the obvious necessity of rigidly controlling mud weight and pressures during the drilling-in process.

Richmond Plans More Upper Magdalena Tests

In addition to the Chorrea Leasehold 2 well, which Richmond Petroleum Company is drilling as its first venture in the La Dorada concession, on the upper Magdalena, Colombia, the company plans to drill at three other locations in the same general vicinity.

Locations 1, 2, and 3 are reported to have been made on the basis of suspected wedgeout stratigraphic trap conditions in the area. Only one of the locations (No. 4) is on the anticlinal dome that has been mapped in the concession. The No. 2 well was reported to be drilling below 3200 feet on January 5, and rigging up has started at the No. 1 location.

Richmond Ready for Test At Caraballo Location

Richmond Petroleum Company has completed camp facilities, roadways and drilling site preparations for its first test within the Caraballo tract (98), southeast of Barranquila, Colombia, immediately east of Socony-Vacuum Oil Company's Pivijay concession. It is reported that Richmond is moving in derrick and rig equipment formerly used by The Superior Oil Company in recent drilling operations in New Zealand, and which is capable of drilling to more than 12,000 feet.

Richmond Gets Concession

After three years of negotiations with the Colombian government Richmond Petroleum Company has been granted a concession contract covering the 55,000-hectare Pinto block (No. 110) in the Department of Magdalena. The tract lies to the east of the lower Magdalena River.

Polish Fields Undamaged In Retreat of Germans

The Soviet government reports that the Germans, in their retreat from southern Poland, made use of all available manpower in salvaging military equipment. As a result the oil fields of the area were left almost completely undamaged.

In the most important fields between Lwow and Cracow, wells and all surface equipment were left in operation and were immediately turned to Russian needs. Minor repairs were required at refineries in Pleczany and Krosno.

Direction of Subsidiary's Facilities Is Requested

The Federal Power Commission has received an application from the Kentucky Natural Gas Corporation, Owensboro, Kentucky, for authority to acquire and operate the assets and natural gas facilities of the Universal Gas Company, a wholly-owned subsidiary.

Included in the facilities covered by the application are 80.45 miles of 2 to 10-inch pipe line and appurtenances for operation in Vigo, Clay, Owen, Putnam, Morgan and Monroe Counties, Indiana.

Revised Petroleum Measure Before Colombian Congress

After prolonged debate throughout most of 1944, culminating in a final revision of the petroleum bill by the minister of mines and petroleum, the measure has now been placed before the congress in an emergency session. The revised bill is expected to be passed shortly, with terms that will liberalize concession contracts granted to foreign companies and thus promote increased exploration and development in Colombia.

Tanker Shortage Limits Production in Venezuela

December production in Venezuela was held to a daily average of 737,000 barrels because of the lack of tanker space to move the oil from terminal storage.

This represents a drop of almost 100,000 barrels daily from the October-November rate, and is nearly 200,000 barrels per day under the total rated potential of the country, based on present pipe line and tank storage facilities.

Mexico Hopes to Increase Production During 1945

To carry out its program of expansion of the Mexican oil industry for 1945, Petroleos Mexicanos, Mexican government oil monopoly has increased the budget over 1943 by $8,200,000. Proposed production of crude oil for this year is 46,254,000 barrels, 10,000,000 barrels above last year's output. Exploration plans include 72 new tests and 87 rehabilitation wells.

The current budget also includes payments to American oil companies on expropriated properties.

U. S. Field Operations

Oklahoma

Cleveland County Test May Be Pool Opener

Pool looms for Cleveland County; Mattheson test nears Wilcox zone; drilling declines in West Edmond; interesting wildcats near testing stage.

Cleveland County: Magnolia Petroleum Company's Anneler 1, CSW NE 26-6n-1w, wildcat southeast of Lexington, swabbed 70 barrels of net oil in 15 hours from Bartlesville sand at 6080-93 feet, and with hole carried to the Wilcox at 7035 feet with no show, plugged back and set pipe at 6207 feet and perforated at 6075-83 feet. The test, which has the earmarks of a pool opener, is on the east edge of a large lease block which covers about the west half of the township.

East of Moore the O. G. Harp Mattheson 1, NE NW NE 19-10n-2w, which tested considerable oil in the Bartlesville zone and then bridged and went dead, was drilling below 7959 feet and nearing the Wilcox zone. Slight stains were reported in the Hunton. Amerada Petroleum Company's Carpenter 1, SW NE NW 17-6n-1e, east of Lexington, was drilling below 6678 feet in lime.

West Edmond: With the 4-county pool running better than 50,000 barrels of oil daily from 340 connected wells, drilling operations are showing a gradual decline as contractors move into other areas. Recent field surveys show a number of steam-powered units stacked. At the same time shortage of parts, particularly for engines and pumps, has slowed down operations. In the Oklahoma County sector 45 operations were reported, including several new producers. Best completion for the week was Stanolind Oil & Gas Company's Lowenstein 1, CNE NW 17-13n-4w, which flowed 270 barrels in 8 hours through tubing choke from Bois D'Arc at plug-back total depth of 7142 feet.

Oklahoma County: Among interesting wildcats testing or about ready to test is Gulf Oil Corporation's Beck 1, CSW SW 15-14n-2w, near the Northeast Edmond pool, potential pool opener which flowed 38 barrels of oil and 10 barrels of acid water plus 600,000 feet of gas through ¼-inch choke from Hunton lime after failing to show in the Wilcox.

Garfield County: North of the old Garber pool, Cities Service Oil Company set oil string and was drilling plug to take potential test at Mariner 1, NW NE NW 6-22n-3w. At total depth of 5297 feet production test will be made opposite Arbuckle lime topped at 5247 feet which showed considerable oil and gas on previous drill stem tests. Good shows were also reported in the Wilcox zone, where drill stem tests at 4886-4932 feet recovered considerable gas and a good oil fill up.

Carter County: Continental Oil Company's Dotson 1, wildcat in SW NE NE 7-2s-3w, at total depth of 6487 feet and with pipe set at 6309 feet, bailed down to 2500 feet, reporting good oil and gas shows as well as oil-cut mud. Crew was preparing to swab in an effort to clean out the mud so shows can be tested and gauged.

Canadian County: Near Mustang, Amerada Petroleum Corporation's Lawson 1, NE SE NW 18-11n-5w, reported stains and odor in a Wilcox sand core cut at 9343-48 feet. The wildcat is west of the Nemaha Ridge in the Anadarko Basin. Woodford shale was cut at 8425 feet, Haragan at 8590 feet, Viola at 8933 feet, Simpson at 9085 feet, and Wilcox was topped at 9205 feet with indications that the well is located on a structural high.

Seminole County: A new shallow pay loomed for the old Wewoka area as Mealy-Wolfe Drilling Company et al's Cyrus 1, SW NW SW 1-8n-7e, reported oil stains at 1741-64 feet in the Upper Calvin sand. The well had drilled to the Booch sand and electrolog run to 3233 feet, where it showed the Booch dry and indicated possible production in the upper zone. If the test pays off it will give the Wewoka area a second zone of pay.

Hughes County: W. N. Bartlett and Ashland Oil Refining Company was preparing to run pipe for production test at Kendall 1-A, SE NW NE 27-6n-8e, after penetrating saturated Booch sand topped at 2475 feet and drilled to 2636 feet with saturation reported in the last 10 feet.

Kansas

Ellis, Stafford Counties Oil Strikes Registered

New oil strike in Ellis, Stafford Counties; Creekmore-Rooney discovery assigned good potential; 7 wildcats prepare to test oil, gas shows.

Ellis County: Nadel & Gussman, Tulsa, opened a new oil area 2½ miles southwest of the Bemis Pool when Karlin 1, SE SE SE 1-12s-18w, flowed 12½ barrels of oil an hour from Arbuckle lime at 3666-74 feet. The strike is along an anticlinal trend worked out from subsurface data and may eventually link the Bemis and Walters pools.

In the same county Max Cohen opened a new pool northwest of the Catherine field when Madden 1, NW NW NE 4-13s-17w, was given a pumping potential of 106 barrels of oil per day from Arbuckle lime at 3613-18 feet. The area has been named the Catherine Northwest pool and may eventually prove an extension to the Catherine field.

Stafford County: Ed Swearer et al's Smith 1, SWC 19-21s-11w, is a small pool opener 2 miles southwest of the

Wells Completed in the United States in Week Ended February 3, 1945

Data preliminary and subject to revision. Revised and more complete data on all completions shown in monthly summary of drilling, published in second issue of each month. More detailed data on wildcats published in third issue of each month.

State or District	FIELD COMPLETIONS: New Wells *Oil	Gas	†Input	Dry	Total	Old Wells Deepened	WILDCAT COMPLETIONS *Oil	Gas	Dry	Total	ALL COMPLETIONS This Week	Last Week	Cumulative This Year	Cumulative Last Year
Alabama									1	1	1		3	
Arkansas	1			1	2						2	1	14	11
California	26				26	1			2	2	29	50	230	146
Colorado													3	2
Florida													1	
Georgia													1	
Illinois	22			6	28	3	1		5	6	37	52	197	132
Indiana	1			2	3				3	3	6	7	27	33
Iowa												1	1	1
Kansas	9	3		6	18	3		1	3	4	25	30	127	182
Kentucky	1			3	4				5	5	9	8	52	59
Louisiana	7	1		5	13	1	1		2	3	17	27	98	45
North Louisiana	3			3	6				2	2	8	11	39	10
South Louisiana	4	1		2	7	1	1			1	9	16	59	35
Michigan	6	1		5	12		1		1	2	14	20	76	54
Mississippi	4			1	5				1	1	6	5	37	6
Missouri													5	2
Montana	4			1	5						5	1	13	26
Nebraska														3
New Mexico	8			2	10				3	3	13	6	58	35
New York	15		10		25						25	25	125	97
Ohio	3	1			4						4	4	28	78
Oklahoma	30	2		8	40						40	35	203	133
Pennsylvania	27	6	15		48						48	45	232	211
Tennessee														2
Texas	66	5	1	18	90	1	6	2	18	26	117	146	644	428
E.Tex.Bor. Co.'s													2	
Rest of E. Texas	1			1	2				2	2	4	5	25	25
North Texas	25		1	6	32		3		6	9	41	33	173	89
W. Central Tex.	2				2				2	2	4	3	22	32
West Texas	24			3	27	1	2		1	3	31	40	166	112
Tex. Panhandle	3	5		2	10				1	1	11	25	58	14
G. Coast, Upper	7			1	8			2	1	3	11	7	58	38
G. Coast, Lower	4			1	5				1	1	6	24	89	78
Southwest Texas				3	3		1		4	5	8	8	43	36
S. Central Texas				1	1						1	1	8	4
West Virginia		11		2	13						13	13	60	92
Wyoming	1				1						1	4	12	14
Total U.S	231	30	26	60	347	9	9	3	44	56	412	480	2,247	1,792

* Includes distillate wells. † Includes salt water disposal wells.

Sniler South field. On pumping test the well made 12 barrels of oil and 8 barrels of water in 24 hours from the Arbuckle at 3550-56 feet after being acidized with 2750 gallons following a 5-quart shot of nitro.

Cowley County: Creekmore-Rooney's Seacat 1, NWC 26-33s-4e, new strike about a mile southwest of the Winfield pool, was assigned a physical potential of 153 barrels of oil daily, natural, from Mississippi lime topped at 3093 feet. Production is from 3098-3113 feet, total depth.

Barber County: J. M. Huber set production string to test stains and odor in cores cut in Viola lime at Buck 2, NE SW NE 35-30s-14w. The wildcat, at total depth of 4468 feet, reported shows at 4391-444 feet, and is 1½ miles northeast of Hargis.

McPherson County: Three miles west of the Graber pool, P. B. Allison's Stucky 1, SWC NE 14-21s-2w, was preparing to test a good oil show in the Lansing topped at 2317 feet. Pipe was set at 2950 feet, total depth.

Rice County: Stains and odor were reported in the Arbuckle and pipe has been set for production test at the Plains Exploration Company's Habinger 1, SE SE SW 18-18s-9w, about 1½ miles southeast of the Bredfelt West pool. With pipe landed at 3212 feet, shows were logged between 3219 and 3225 feet, total depth.

Trego County: About 1 mile south of the Ogallah pool, Lee Greenburg set production string in Cotton 1, SW SW NE 15-12s-21w, for a test of an oil show in Arbuckle lime between 3958-62 feet, total depth. The test is on the northwest rim of the Kansas Uplift.

Sedgwick County: A new pool loomed 4 miles south of the abandoned Cheney field as Phillips Petroleum Company prepared to test Northcutt 1, SE SW NE 6-27s-4w. Topping Viola lime at 4004 feet, a core cut at 4003-4006 feet showed good stains and odor.

Graham County: Fred Koch was preparing to test Faulkner 1, SW SE SE 27-10s-22w, after landing oil string at 4100 feet. Good oil and gas shows were reported in the Lansing, Simpson and Arbuckle zones. The wildcat is 7 miles south and 5 miles west of the Morel pool.

Five miles south of the Ray pool, J. O. Hansen's Hansen 1-B, SEc 23-6s-21w, was drilling below 3350 feet, after cutting cores showing good saturation in the Topeka at 3327-3333 feet, and in the Lansing lime at 3335-3338 feet.

Iowa

Fletcher E. Hunt of Adair is core-drilling a structure near Redfield, Iowa, and may drill another wildcat on the basis of results. He is attempting to find the high in an area where previous wildcat failures showed gas during testing operations. Hunt's last well was the Moncelle 1, SW SE 26-78n-29w, Dallas County, which was dry and abandoned at 2000 feet.

Missouri

Claude McQueen et al's Patterson 1, NWC NE 14-64n-38w, was reported drilling below 1100 feet with Lansing lime topped at 590 feet and the base of the Hertha logged at 895 feet. This is one of 4 wildcats being drilled in the area 14 miles west of Maryville, Nodaway County, where a number of dry holes have been logged.

Platte County: Wilson et al's Kincaid 1, SW SE SE 8-54n-33w, about 10 miles southwest of the Plattsburg pool, was drilling below 300 feet, and Fox's Fee 1, SEC SW 12-51n-35w, was shut down at 670 feet.

Nebraska

In Dakota County, about 8 miles southeast of Dakota City, Peder Skriver's Armour 1, CNW NE 33-28n-8e, was making hole below 1500 feet, and in northern Holt County Wynn & Shaver's Fee 1, NE NW 32-33n-11w, was drilling below 1100 feet. No shows were reported.

New Mexico

Gas Strike in Prospect For Barker Dome Field

Deep gas strike is in prospect for the Barker Dome gas field, San Juan County; Lea County prospect is showing for a new oil pool, else a major south extension to the Maljamar field; and a wildcat in the southwest portion of the county is making gas and sulphur water.

San Juan County: Southern Union Gas Company's Barker Dome-Ute 9, C SE NW 21-32n-14w, near Apex of the Barker Dome structure that produces gas from the 2400 and 3200-foot zones, entered the first of 3 prospective sweet gas horizons at 8300 feet, and was drilling at 8680 feet. The gas volume was rated at 7,000,000 feet daily in drill-stem test, and some evidence of oil saturation was reported in cores. This new horizon is tentatively identified as the Paradox section of the Pennsylvanian. The test may continue to granite before running pipe for completion.

Lea County: E. J. McCurdy and McElroy Ranch Company's State-Young 1, C NE NW 20-18s-32e, 2¾ miles south by west of the Maljamar field and 2½ miles west of the Cheesman 2-well pool, filled 2000 feet with oil in 9 hours from sand at 3765-78 feet, and shut down at 3780 feet to set pipe. Production is from the Red sand, topped at 3737 feet with elevation of 3747 feet, and is the equivalent to the upper pay in the Maljamar area.

Culbertson & Irwin Incorporated's Culbertson-Federal 1, C SW NE 26-22s-32e, was rated at 8,000,000 cubic feet of gas daily with spray of sulphur water at 3515 feet, and will attempt to mud off to continue to its Delaware objective. The test is 3 miles west by south of James Mascho and Continental Oil Company's Cloyd 1, which blew gas and water at 3319 feet, then became junked at 3516 feet, while an offset missed the gas but logged nominal volume of free oil in Delaware before abandoning at 5038 feet. Culbertson-Federal 1 logged salt series at 1155-3255 feet with elevation of 3727 feet.

Skelly Oil Company's Steeler 2, C NE NE 17-23s-37e, Clear Fork test for the Skelly field, 6 miles southwest of the Penrose deep field, recovered 90 feet of gas-cut mud when tester was used in the Glorietta at 5460-5520 feet. It will continue to the Fullerton section of the Clear Fork.

☆

ROBERT E. BOCKRATH has been named manager of Dow Chemical Company's Houston office, effective February 1, functioning under the jurisdiction of Arthur Smith, Jr., southwestern sales manager of the magnesium division at St. Louis, Missouri.

West Texas

Ordovician Test Passes Up Pennsylvanian Production

Howard County's first Ordovician project temporarily passes up indicated sweet crude production from the Pennsylvanian. Lubbock County assured of its third oil area; first completion try for the Silurian flows briefly.

Howard County: Continental Oil Company and Group One Oil Corporation's Settles 1-D-133, SE NW NW W&NW Ry. 133, Block 29, offsetting regular Permian production in the Howard-Glasscock field, indicated production possibilities from the Pennsylvanian, and was drilling at 8967 feet in black shale to explore the Ordovician before attempting completion. This deep prospect entered an unidentified Lower Pennsylvanian lime at 8924 feet, with elevation of 2696 feet, and is credited with about 8 feet of porous zone in drilling to 8935 feet. A drill-stem test at 8920-43 feet returned 2000-foot water cushion cut with oil and gas and 800 feet of free oil with fair gas blow.

This showing is significant since the test is 700 feet high structurally to John L. Moor et al's McDowell 1, 9½ miles west by south, that passed up small volume of 43-gravity sweet crude in the Crinoidal (Pennsylvanian) between 9484 and 9510 feet, then was abandoned with flow of more than 500 barrels of hot sulphur water hourly from Ellenburger at 10,470-10,906 feet. Phillips Petroleum Company's McDowell-Dow 1, ⅛-mile southeast of this isolated Ellenburger failure, was drilling lime at 7265 feet on Ellenburger contract, but the 9500-foot zone is its prime objective.

Lubbock County: Seaboard Oil Company and Stanolind Oil & Gas Company's Cravens 1, C SW SW L&SV Ry. 16, Block D, and 14 miles east by south of the Anton pool discovery in the same geological zone, is establishing a new oil area in swabbing 7 to 8 barrels of oil hourly after reacidizing with 6000 gallons in broken pay at 6050-6170 feet, having plugged back from shale at 8800 feet. The fluid level remains fairly constant at 3000 feet off bottom, thus assuring a commercial pumper. Cravens 1 is lower structurally than the Anton discovery, which entered granite at 7185 feet, but the former is producing from a higher section of the Basal Permian.

Seaboard Oil Company and Texas Pacific Coal & Oil Company's Nairn 2, a mile northwest of the Lubbock (Nairn) pool Clear Fork discovery pumper, was drilling at 3830 feet, having entered the San Andres at 3110 feet, or 9 feet low.

Magnolia Petroleum Company's Johnson 1, 5¾ miles northeast of the Stinnett pool, was drilling chert at 10,055 feet, having entered the Pennsylvanian at 6540 feet and shale beds at 7355 feet.

Crane County: Francis A. Callery et al's Tubb 1-B, C NE NE PSL 30, Block B-32, 1/3-mile southwest of an old Clear Fork (Tubb) producer on the southeast edge of the original Sand Hills field, entered the San Andres at 2615 feet, 52 feet high, with high-pressure gas at 2635-2715 feet and fair to good oil porosity in the McKnight at 2900-50 feet. The McKnight zone has accounted for 6

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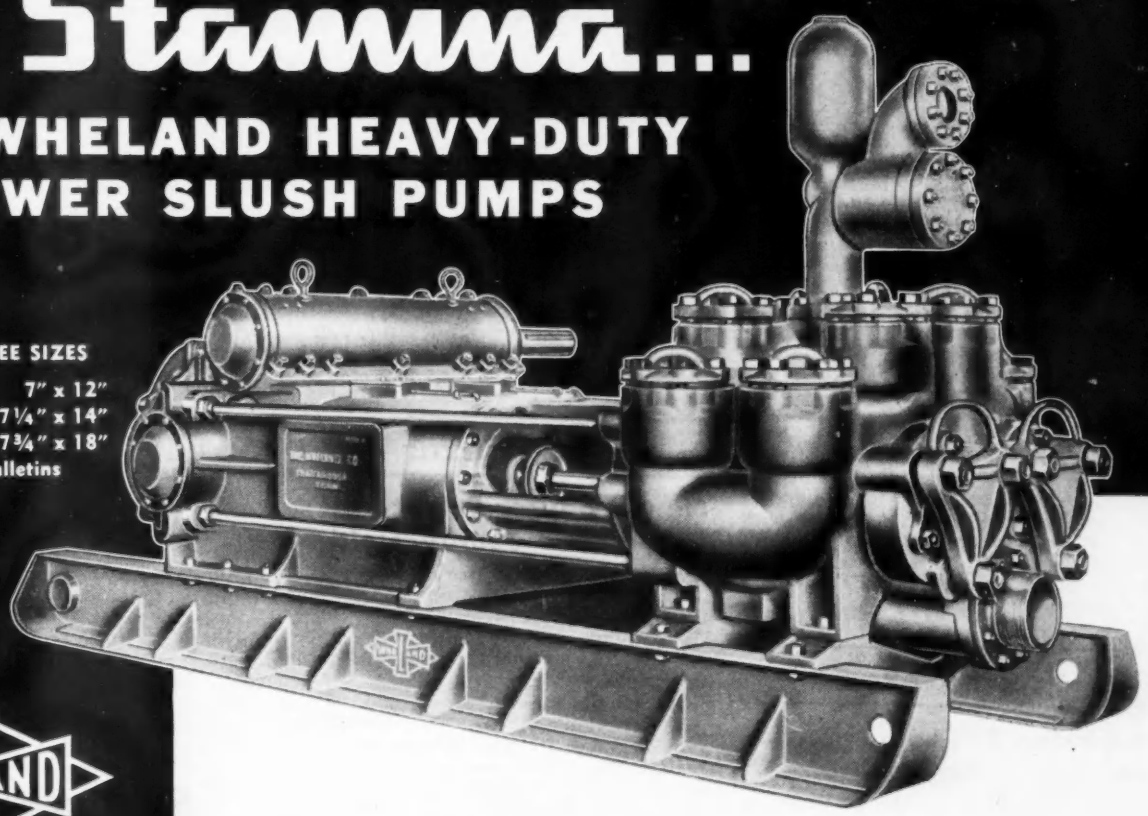

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prolific wells on the northeast edge of the large structure, although it involves a flank accumulation, and this new operation will result in its development on the southeast side of the field. Tubb 1-B was drilling at 3125 feet to explore the Clear Fork and possibly the Ordovician before attempting completion. Sun Oil Company's Roberdeau 1, 1¾ miles northwest of 3200-foot Clear Fork production in the Crossett area and about 100 feet high on the San Andres, was drilling lime at 2557 feet.

Winkler County: Continental Oil Company's Walton 1-D, ¼-mile west of normal Ellenburger producer in the Keystone area and 1022 feet low in entering Ellenburger at 10,180 feet, failed to indicate production or water in drilling to 10,576 feet, and will plug back to try for completion in the 4900-foot Holt lime. This is the first deep failure, although an outpost proved dry in the Ordovician, and established the presence of a thrust fault, or overturned fold in logging regular Simpson beds, then several hundred feet of Ellenburger that was followed by Simpson to total depth. A similar situation prevails in the Abell field. Sun Oil Company's Keystone 2, 2 miles north by west of deep production, squeezed perforations in Silurian at 8580-8600 feet to retest after this zone responded to treatment with 500 gallons of mud acid with flow of 39 barrels of oil in 8 hours through ½-inch choke, then swabbed 85 percent salt water.

North Texas

Mississippian Production For Garvey-Farmer Field

Oil production from the Mississippian is assured for the Garvey-Farmer field, Young County; Jack County wildcat flowing by heads from Mississippian, making 3 prospective oil zones; Grayson County deep prospect will run pipe for production test of Ordovician.

Young County: Standard Oil Company of Ohio's Garvey-Garr 2, BBB&C Ry. Sec. 1, east side of the Garvey-Farmer 4400-foot Bend pool, which extends into Archer County, entered the Mississippian at 5162 feet with effective saturation to 5300 feet then nominal oil stain and porosity to 5340 feet.

A drill-stem test at 5180-5217 feet yielded gas to surface in 7 minutes and a steady flow of oil in 44 minutes with bottom-hole pressure calculated at 2150 pounds. Pipe will be run to complete.

This lower pay was uncovered late last year by the company's Garvey 1-C, SW SW SW TE&L Co. Sec. 1802, 9700 feet west of the Bend production, but lost drill-pipe at 5415 feet necessitated sidetracking. The Mississippian was entered at 5095 feet in drilling by, and broken saturation was logged from 5124 to 5216 feet with water from 5219 to 5296 feet. This original Mississippian project then flowed by heads after using 500 gallons of acid through perforations at 5170-5200 feet, and probably will flow steady when reacidized. Since these 2 deep tests straddle the 6-well Bend pool, a large Mississippian area is likely.

Thomas D. Humphrey's McCloud 2, south offset to a large gasser from the Mississippian 4400-foot lime in the east extension of the Sewell field, is rated at 16,000,000 feet of gas and spray of oil daily from Bend perforations at 4042-52 feet. This new completion made 128 barrels of oil daily when first tested. These wells pave the way for the expansion of the field into Jack County.

Jack County: James Stewart & Company's Kinder 1-D, NWc of the B. H. Epperson Survey A-208 and 1¾ miles east by south of Mississippian gasser in Sewell field, entered the Mississippian at 4542 feet, 208 feet low, and was flowing oil by heads from open hole at 4542-4652 feet, with most effective pay near bottom. Kinder 1-D passed up nominal production in the 3900-foot Bend, and flowed 113 barrels daily natural while drilling the 4100-foot Marble Falls.

Grayson County: The Pure Oil Company's Quintin Little 1-A, Gordonville geophysical prospect, was drilling lime and dolomite at 9520 feet, having entered soft dolomite at 9427 feet. It will continue to Ellenburger before running 5½-inch pipe recently delivered to the location after showing oil saturation at 9040-54 feet in the Joins sand of the Simpson series.

East Texas

New Producer Registered In Hopkins County Field

Second producer scored in Pickton area, Hopkins County; northeast outpost will explore deeper zones; Freestone County gas-distillate prospect being tested; Smackover test in Titus County is a failure.

Hopkins County: Hunt Oil Company's Spigner 1, J. E. Fowler survey and an offset to the Pickton field discovery, was flowing into tanks through tubing-choke with 1600 pounds working pressure on tubing and 800 pounds on casing from Bacon (Rodessa) lime perforations at 7892-7903 feet. The volume of flow was not gauged, but a better well than the discovery was indicated. Spigner 1 is credited with 13-foot pay zone, and was drilled to 7669 feet. Sun Oil Company's Turner 1, 8000-foot northeast outpost, found the Bacon zone barren, and was drilling at 8090 feet to test the Travis peak.

Humble Oil & Refining Company's W. A Nichols 1, between this outpost and the producers, occupies the highest structural position, having logged the Paluxy at 6294 fet and the Glen Rose at 6644 feet with elevation of 481 feet, and was drilling shale and anhydrite at 7680 feet.

Titus County: Humble Oil & Refining Company's Searcy 1, Wm. H. Gilbert Survey and 1½ miles south of Mount Pleasant, entered the Smackover lime at 11,790 feet with elevation of 398 feet, and the formation was slightly porous with sulphur odor in coring to 11,827 feet.

A drill stem test with packer at 11,802 feet failed, and another test is pending. Searcy 1 is credited with having entered Cotton Valley at 9135 feet and Buckner at 11,135 feet.

Humble Oil & Refining Company's Hague 1, Franklin County wildcat failure 5 miles southeast of Mount Pleasant, entered the Buckner at 10,223 feet and Smackover at 11,238 feet with elevation of 422 feet. Favorable porosity and an abundance of water was logged in drilling to 11,510 feet.

The fact that the Smackover is porous and carries water is considered encouraging for the eventual development of this zone as a source of production in the general area.

Falls County: H. C. Cockburn et al's Cockburn-Gilliam 1, D. Barclay survey and 1½ miles northwest of Stranger, stimulated interest in deep exploration along the Mexia-Luling fault trend in encountering evidence of gas from thin porous zone in drilling the Cotton Valley section of 6652 feet. This projected Smackover lime test logged normal section of Travis Peak, topped at 4820 feet with elevation of 408 feet, then entered the Cotton Valley series at 6065 feet and first line at 6190 feet.

Freestone County: The Texas Company's McKnight 1, I. H. Reed survey and 3 miles southwest of Fairfield, tested salt water with nominal show of gas and distillate from perforations at 8438-42 feet in Travis Peak, topped at 7985 feet, with pipe on bottom at 8903 feet. Production was not anticipated at the above level, and next perforations will be made opposite the deepest of 3 prospective gas-distillate zones, aggregating 74 feet, between 8233 and 8386 feet.

Smith County: Phillips Petroleum Company's Grelling 1, 300 feet northwest of its south Tyler Rodessa discovery, entered the massive anhydrite at 9256 feet, being 23 feet low and was drilling at 9310 feet with improved structural position noted below the Paluxy. The company's Englander 1, Don T. Quevado survey and 3½ miles south by west of the discovery, was drilling at 10,380 feet, having entered the Travis Peak at 10,365 feet with elevation of 567 feet. Information has been conflicting as to whether this outpost logged pay in the Rodessa series.

Southwest Texas

Showings Noted in Bee And Jackson County Wells

Interesting showings noted in wells in Bee and Jackson County.

Bee County: W. Earl Rowe's Nona Berry Davis 2, ¾-mile north of the Davis 1, which opened a new producing area, is reported to have set casing for a production test expected to show gas and possibly oil. On recent drill-stem tests at 3612-18 feet and 3618-22 feet, it recovered 40 to 50 feet of oil, but is understood to have gone into gas sand at a point below this.

Jackson County: Stewarts, Incorporated's A. E. Westhoff et al 1, wildcat 1½ miles southeast of Edna, has made a drill-stem test which indicated possible opening of a new gas field. No estimate of volume expected was made, but a 7-minute test at 5431-39 feet where casing was perforated showed 1500 pounds working pressure using ¼-inch chokes at top and bottom. The 5½-inch casing is set at total depth of 6516 feet. It probably will test other levels before final completion as a gasser.

Humble Oil & Refining Company's Maggie Branch 8, Ganado field, has been abandoned after drilling to 6700 feet. It had been drilled as a test to the deep horizon.

Victoria County: James Stewart's Mrs. Grace Gaffney 1, wildcat 3 miles southeast of the Terrell field, Juan Flores survey, is drilling below 5800 feet in shale, having reported no further showings.

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San Patricio County: Two wildcats were announced, one by Hewitt & Dougherty on the Walter F. Timon property 10 miles southeast of Mathis, scheduled to 6500 feet on a 1200-acre lease. The other is a 6000-foot well by Jay Simmons just 2½ miles southeast of Mathis in Block 15 of the J. J. Summers Subdivision.

Nueces County: Stanolind Oil & Gas Company's Jennie A. Thompson, latest well for the Riverside field, completed through perforations at 6309-11 feet, flowing 97 barrels of 40-gravity oil on potential test through a 6/64-inch choke with tubing pressure 875 pounds and gas-oil ratio 585-1. Total depth was 6600 feet.

Brooks County: Humble Oil & Refining Company's Dan Sullivan 1, wildcat 8 miles southeast of Falfurrias, has cored to 8010 feet and is reaming hole, probably preparatory to coring. It has reported no showings since recovering some oil on a drill-stem test at 7779-91 feet.

Farther to the southeast, Humble's Dan Sullivan B-1 has had some showings and is making a drill-stem test with total depth 6741 feet.

The Texas Company continues testing in its Mary Lasater 2, 4½ miles southeasterly from Falfurrias, having recovered only a slight blow of gas on drill-stem test with packer set below 7248 feet.

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RAE F. BELL, vice president of A. O. Smith Corporation, has been elected president of the organization, succeeding the late L. R. Smith.

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Texas Gulf Coast

Colorado County Receives Gas-Condensate Field

Pan American Production Company opens Colorado County gas-condensate field; Smith Point field in Chambers County extended; Spring field in Harris County likely to have second producer soon; final potential taken on Addicks discovery in Harris County.

Colorado County: Pan American Production Company's R. L. Williams 1 has been completed to open the West Orange Hill field, more than 2 miles northeast of production in the Ramsey field. It perforated casing at 8368-90 feet for a drill-stem test, which flowed gas and condensate following a number of unsuccessful tests lower in the hole, and then ran tubing for completion. It was cleaned into the pits, flowing through a ⅛-inch choke under tubing pressure of 2275 pounds for 8 hours before being shut in. No tanks or separators had been erected at the location so it has not yet been gauged. Production is from the Wilcox sand. The rig is being moved to the company's Schindler 1, 2400 feet northeast of the discovery well.

Harris County: The Spring field in northern part of the county should have its second producer soon following showings recovered in the Cockfield sand in Eltex, Limited's Bender Estate 3. The well, a southwest offset to the discovery well, cored 10 feet of sand showing oil from 6239-49 feet in the Cockfield formation and set a string of 7-inch casing on bottom for a production test.

The Texas Company's Madge Hopkins 1, which opened a new producing area near Addicks, has made official potential test, although it is a very small producer. It had been reported as planning for completion as a pumper, but potential test was taken flowing through a ¼-inch choke, making 4.13 barrels of 45-gravity oil in 24 hours with tubing pressure 25 pounds. Production is from perforations at 7702-08 feet.

Chambers County: Standard Oil Company of Texas' State 110-1, in Galveston Bay, has extended the Smith Point field 2500 feet northwest in completing through perforations at 8126-36 feet in the regular pay. It was gauged on initial tests at 124 barrels of 41-gravity oil in 13 hours through a ⅛-inch choke with tubing pressure 1445 pounds and gas-oil ratio 845-1. Total depth is 8225 feet with the 7-inch casing landed at 8223 feet.

South Louisiana

Producer Is Registered In West Tepetate Field

East Moss Lake field in Calcasieu Parish, and West Tepetate Field of Jefferson Davis Parish received slight extensions; Humble makes test which may prove another pay in the Avery Island field where two sands are already producing; district starts year with a number of new locations in wildcat and proven areas.

Jefferson Davis Parish: The West Tepetate field received its third pro-

ducer when Barnsdall Oil Company et al completed Fuselier 2, northeast offset to the discovery well, making 713 barrels of pipe line oil daily through a 16/64-inch choke from perforations at 8520-26 feet. Tubing pressure is 1475 pounds and casing pressure 1800 pounds. It was completed in the original discovery sand after having tested salt water from the lower sand near 9200 feet.

The same operators' Fuselier 3, north offset to discovery and west of the above well, is making a drill-stem test of the upper sand after reaching total depth of 8552 feet. It probably will drill to the lower horizon.

Calcasieu Parish: Union Oil Company of California has completed Scheperle 1, in the East Moss Lake field, through perforations at 10,432-444 feet and is showing extremely high pressure while shut in. On initial test through a ⅛-inch choke it flowed 70 barrels of 48-gravity condensate in 19 hours with tubing pressure 5000 pounds. Shut-in tubing pressure is 6100 pounds. This is the third well for the area, discovered by Continental Oil Company last year.

Iberville Parish: The Carter Oil Company has made location for a deep test, its Wilbert-Myrtle Grove 18, in the Bayou Choctaw field, scheduled to 12,000 feet with Penrod Drilling Company as contractor. Location is in the northwest corner of 61-9s-11e.

Humble Oil & Refining Company's Schwing C-1, in the Bayou Goula area, 10-10s-11e, is shut down for repairs at total depth 10,247 feet after landing a string of 9⅝-inch casing at 10,240.

Iberia Parish: Humble Oil & Refining Company, which recently opened a new pay at 9415 feet at Avery Island with Petit Anse 2, is testing Petit Anse B-3 with casing perforated at 9830-45 feet. A sand at 10,175 feet had been proved productive in July, 1944.

LaFourche Parish: C. I. Production Company, Inc., has made location for Octave Aucoin 1 as a new wildcat 2 miles west of production in the Lake Long Field. Contract depth is 10,500 feet with Humble Oil & Refining Company, Fohs Oil Company, and Pilgrim Exploration Company supporting the test. Location is 660 feet north and east of southwest corner of 56-17s-19e.

Sun Oil Company's Cypress 8, Chacahoula field, is testing from perforations at 7855-72 feet, and is flowing at a rate of 7½ barrels of oil hourly through a ⅛-inch choke with tubing pressure 1250 pounds. Final gauge has not been completed. Total depth is 8072 feet with 7-inch casing at 8044 feet.

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North Louisiana

Producing Areas May Be Opened by Two Wildcats

Two wildcats which may open producing areas in Caddo and Natchitoches Parishes are testing.

Caddo Parish: Phillips Petroleum Company's Moneyham 1, C NE NW 5-18n-16w, is reported to have 2 possible producing zones. Gas and a spray of distillate were obtained from perforations opposite the Travis Peak at 5948-56 feet.

Later the well was plugged back and perforated with 50 shots, in what may be the Pettit. A drill stem test recovered approximately 2000 feet of fluid, most of which was oil and some salt water. Total depth is 6512 feet, with string of 5½-inch casing set at 6077 feet.

Natchitoches Parish: The California Company reperforated from 4240-50 feet in Annie Morrison 1, 12-13n-8w, and recovered salt water on a drill stem test of the wildcat. Another squeeze job has been run. Prospective pay zones in the wildcat are not yet understood to have been tested. Information is being withheld, but it is believed that the well logged a showing of gas and probably oil in the Eagleford at 3295-3333, and sand in the Rodessa series with showing of oil from 5116-33 feet.

W. C. Feazel and Dewitte C. Loe are moving in derrick for McIntyre 1, 12-13n-8w, a proposed Woodbine sand test in the southwest diagonal 40 acres offsetting Annie Morrison 1. A. P. Wingfield and G. A. Lindsey have applied for permit to drill Sullivan 1, NW NW 6-13n-7w, 1 mile northeast of Morrison 1, as a 5500-foot test.

Richland Parish: Charles H. Murphy, Jr., and Sun Oil Company's Ella M. Barrier 1, 22-17n-9e, is coring at 3230 feet and checking normally with structure in the discovery well. This test may extend production in the Delhi field 2 40-acre locations to the east.

Operators have cemented casing in J. E. Holt B-1, C SE NE 21-17n-9e, northeast diagonal offset to the Delhi discovery. Total depth is 3277 feet, with the well checking some 50 feet higher on structure than the discovery. Murphy and Sun have 2 other locations in the area and will skid rigs as soon as the 2 now being drilled are completed.

Two other wildcats are drilling in the area, James E. Kemp's May 1, 26-17n-9e, is drilling below 3588 feet, without showings of oil or gas. Rogers Lacy's B. May 1, C SW NW 26-17n-9e, is drilling below 2980 feet without shows.

Caldwell Parish: Shell Oil Company's Louisiana Central Lumber Company 1, 31-15n-3e, deep wildcat test, is drilling below 11,275 feet in shale.

☆

GRADY KIRBY has been named president of Federal Royalty Company, San Antonio, Texas, to succeed the late Lee Hager. The company also will engage in oil operation to a limited extent. Kirby, a geologist (University of Oklahoma, 1915, with graduate work in the University of Chicago) has worked in the principal fields of both North and South America.

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Arkansas

Wildcat in Union County Is Recorded as Failure

A wildcat failure in Union County was the only deviation from a week of routine progress.

Union County: National Associated Petroleum Company abandoned Annie Smith 1, NE NE NE 17-16s-17w, on a farmout of the Carter Oil Company. The well took a core from 6382-85 feet which recovered 18 feet of tight lime; another core from 6385-95 feet recovered 18 feet of light lime with salty taste. Electrical survey did not indicate production.

Marine Oil Company is drilling in the Buckner below 6197 feet in L. O. McGough 1, C NE NW 34-17s-13w. No test has been run on a possible oil producing sand from 3563-79 feet in the Cotton Valley.

Columbia County: The allowable for Atlanta field has been cut back from 125 to 100 barrels of oil per well per day, effective February 1, after a hearing by members of the Arkansas Oil and Gas Commission. The decrease was held necessary because of a rapid decline of pressure in the field, which makes evident the fact that some means of repressuring must be started soon.

McAlester Fuel Oil Company is pumping 1 to 1½ percent oil in 150 barrels of fluid per day in Baker 1, C SE NW 13-17s-20w, a previously abandoned test in Magnolia field. It does not seem likely that continual pumping will eliminate the formation water as was first believed possible.

Ouachita County: G. H. Vaughn's J. F. Haltom 1, NE NE SE 28-15s-18w, has been halted by high water. The well was testing the Tokio horizon through 35 perforations from 2474-80 feet, after previously testing 100 percent salt water. It is probable that another squeeze job will be run when operations are resumed.

Southeastern

Showings Are Reported In Mississippi Wildcat

Showings reported in a Pearl River County, Mississippi, wildcat; preparations made for test of wildcat in Marion County; shows of oil and gas reported in wildcat west of Tinsley field; Gulf Refining Company recovers water on first test in its Soso wildcat, Jasper County.

Marion County: Humble Oil & Refining Company's A. Evans 1, wildcat in the area 9 miles southeast of Columbia, is preparing to perforate casing for the first test of showings previously reported. The 5½-inch casing was cemented on bottom at 9554 feet, and first test probably will be made around 9064-79 feet, where a drill-stem test showed gas and distillate. The Massive section carried water, according to preliminary information.

Gulf Refining Company has abandoned Bradshaw 3, Keno area, after drilling to 9622 feet without showings of gas or oil in Eutaw or Tuscaloosa. Gulf is preparing to start operations on Bradshaw 4, another wildcat in the same general area.

Pearl River County: Hassie Hunt, Trustee's R. Batson et al 1, wildcat 10 miles southeast of the new Baxterville field, in the northern part of the county, is trying to mill up a testing tool lost in the hole at 8749 feet while trying to take a drill-stem test of formation showing gas and distillate cored at 8940-49 feet. Operators plan another short core after the tool is removed from the hole and then take another drill-stem test.

In 20-1s-15w, 7 miles westerly from the Hunt well, Sinclair-Wyoming Oil Company's R. Batson 1 is drilling below 8930 feet in shale.

Jasper County: Gulf Refining Company's Edwards-Bailey Unit 1, Soso prospect, has recovered salt water on the first test attempted since setting the casing. Perforations were made at 7828-34 feet, and a drill-stem test taken which showed 7364 feet of salt water with no oil or gas. It it now making a squeeze job and preparing to test another sand.

American Liberty Oil Company is preparing to drill a long northward extension to the western part of the Heidelberg field, having made location for Pink Ulmer 1, in 26-1n-12e, a mile from present production.

Yazoo County: Southern Natural Gas Company's Gammil Investment Company 1, 9 miles west of Tinsley field, recovered 70 feet of gas-cut mud showing oil, and 10 feet of salt water on a drill-stem test at 7461-74 feet, and is now drilling below 7505 feet, where it is below the original 7500-foot contract, but will now be carried deeper following the shows found.

Union Producing Company's Jennie Stevens 21, deep test in the Tinsley field is drilling below 5050 feet in shale, scheduled to 12,000 feet, as the first really deep test for the field.

Issaquena County: The California Company's Mississippi Alluvial Farms 1, wildcat in the western part of the state, is coring below 8705 feet in hard sand with shale streaks. It is reported the well reached Smackover lime at 7999 feet and had showings of heavy black oil in the top few feet, but no confirmation has been made.

Florida

Humble Oil & Refining Company is drilling below 5041 feet in lime at Gulf Coast Realties 4, 20-48s-30e, Collier County; and is drilling at 11,229 feet in anhydrite in State 1, C NE NW 30-55s-36e, Dade County. The company's Carleton Estate 1, C SW NE 34-38s-29e, Highlands County, which had been waiting on water, is now drilling below 1412 feet in lime.

The Pure Oil Company has been drilling steadily at C. C. Hopkins 2, C NW NW 21-6s-9e, Gulf County, and is at 303 feet. O. D. Robinson's State 1, T-59s-40e, in Card Sound, Monroe County, is drilling below 1234 feet.

Florida's state attorney general is reported to be assembling information regarding oil conservation, though as yet the state has one producing area at Sunniland, for the legislative session in February. A Mid-Continent Oil & Gas Association representative and the major oil companies have been asked to confer with him.

Georgia

Sun Oil Company's Doster-Ladson 1, Land Lot 71, Land District 7, Atkinson County, is drilling below 4075 feet. In Toombs County, Tropic Oil Company's Gibson 1, 4½ miles southwest of Lyons, is changing rigs, still at 610 feet.

Alabama

H. L. Hunt has drilled to 3483 feet in Maggie Utsey 2, 33-11n-4e, Evansboro field, Choctaw County, and is rigging up pump to test. At 3467 feet 5½-inch casing was set.

Glen Rose reportedly logged several oil showings in Z. A. Boshell 1, C NW NE 18-12s-8w, wildcat in Winston County, one at 695 feet, 1705 feet, 1780 feet, and 1830 feet with a showing of gas at 1376 feet. Total depth is 2004 feet.

Illinois Basin

Pay Horizon Is Opened In Jefferson County

Magnolia Petroleum Company has opened a new pay horizon in the Woodlawn pool of Jefferson County, Illinois, at Eubanks 6, SW SW NW 1-3s-1e. The discovery well originally produced from Bethel sand at 1945 feet. Deepened, pay was discovered in the Aux Vases sand at 1976-88 feet. On initial production test the well made 305 barrels of oil in 24 hours.

Coles County: Anthony Keating boosted production at 2 wells in the Mattoon pool. Uphoff 5, NW C 25-12n-7e, which originally made about 40 barrels daily, pumped 105 barrels in 24 hours after a 30-quart shot in Aux Vases at 1986-95 feet. Uphoff 2 yielded 100 barrels in 24 hours from Aux Vases at 1991-2004 feet after a 30-quart shot.

Richland County: Gulf Refining Company has boosted interest in the new Preston township pool with Schrey 1, NE SE NE 23-4n-10e. On pump test of McClosky lime at 3085-94 feet, the well produced 432 barrels of oil and 14 barrels of water in 24 hours.

Jefferson County: Cameron Oil Company's High 1, SE SE SW 19-1s-2e, has set casing for production test of Aux Vases sand saturation topped at 2213 feet.

Kentucky

The Carter Oil Company has given the St. Vincent pool of Union County a ½ mile north extension at Drury 3, 1-O-20. During a drill stem test of pay break at 2541-48 feet the well showed 1250 feet of oil in 2½ hours. At 2556-63 feet, the well started flowing oil in 30 minutes and continued steadily for an hour.

California

Permit Sought to Drill Near Torrance City Limits

Permit sought to drill near Torrance; Kern County test completed in Carnerous; test near Chatsworth abandoned; location graded for gas test in San Joaquin County; tideland well near Rincon completed.

The Ohio Oil Company filed application with Gardena City Council for a permit to drill a test near the intersection of Western Avenue and Redondo Beach Boulevard, a short distance east of the city limits of Torrance. The company holds about 750 acres of community leases surrounding the tentative location, situated mainly in an area bounded by Normandie, Crenshaw,

Rosecrans and 168th street. The block consists mostly of acreage, with only a few town lots.

Kern County: Rothschild and Bender completed Anderson 2 in 20-29-21 for 200 barrels daily, 24 gravity clean oil through an 8/64-inch choke. Pay is from the Carnerous sand, 3039-3054 feet. A location is being graded for Anderson 3, NW NW 20-29-21. Independent Exploration Company will offset Anderson 2.

Los Angeles County: Barnsdall Oil Company's Rancho San Francisco deep test of the Newhall-Potrero field is 11,061 feet in hard shale. The next objective is the Sesnon sand productive in the Aliso Canyon field.

Shell Oil Company's Shoenfeld 1, SW NW 30-2-16, near Chatsworth, drilled to 5162 feet and is being abandoned.

Santa Barbara County: Shell Oil Company's Covarrubias 1-35, near Capitan, in 32-5-30, is drilling at 3825 feet. On a test at 3290-3450 feet the well flowed at a daily rate of 1620 barrels of oil, 39.2 gravity, 1 percent, and 1,200,000 cubic feet of gas. At 3442-3540 feet it flowed at a rate of 158 barrels of oil and 3,400,000 cubic feet of gas. At 3544-3642 feet it flowed 1584 barrels of oil daily, 38.7 gravity, and 1,900,000 cubic feet of gas.

San Joaquin County: Honolulu Oil Corporation is grading location for a gas test, Brack Comm. 1, in 29-3-6, north of Lodi.

Venturi County: Beloil Corporation, Ltd.'s Hickey-State 1, tideland well in 7-3-24, west of Rincon, was completed January 21, pumping 150 barrels per day, 27 gravity, 12 percent mud. Present production is 125 barrels per day, 27 gravity, 8.0 cut. Depth is 3860 feet, plugged to 3660 feet, with the shut-off at 3600 feet.

Michigan

First Field Discovery Of Year Receives Test

Year's first field discovery tested: Clinton County test may be Traverse lime discovery.

Montcalm County: Gordon Oil Company placed Paris 1, SE NW NW 6-12n-8w, Cato Township, on production for an initial flowing rate of 10 barrels of oil and 20 barrels of water for the first field discovery in 1945. Production is from a thin pay section in the Monroe dolomite at 3542-45 feet. Efforts to reduce water or eliminate it from the production by plugbacks and perforating were not successful.

The well is 5 miles east of a small Monroe lime-dolomite pool in Winfield Township.

Clinton County: Smith Petroleum Company's Kellam 1, SW NE NE 33-8n-4w, Lebanon Township, is still under test as a possible Traverse lime discovery but mechanical difficulties have delayed an adequate test of the outpost. Traverse, topped at 2549 feet showed a pay at 2565-75 feet with 2000 feet of fluid showing before casing was run for a production test.

Clare County: The Pure Oil Company drilled Dundee dry on Wendergen 1, 6-20n-6w, Winterfield Township, but will deepen to 5100 feet to test Richfield-Sylvania section. Dundee was logged at 3886 and carried water at 3990 feet.

Rocky Mountain Area

Rangely Field, Colorado, Sets Pace in New Activity

Rangely field, Colorado, leading in activity; Colorado test nearing pay sand; oil discovery registered in Toole County, Montana; extension likely in Los Soldier field, Wyoming; discovery made in Natrona County, Wyoming.

Rangely Field: Eight rotary rigs are drilling and 3 others are moving in equipment, making this northwestern Colorado field the area's leader in new activity. When weather permits, it is believed that more than 20 rigs will be operating.

Wilson Creek: The Texas Company-The California Company's Unit 20, NE SW NE 34-3n-94w, deep test of the Weber, is drilling in Red Beds below 7587 feet. Production in the field is from the Sundance sand at 6800 feet.

Toole County, Montana: The Texas Company has an oil discovery in Ekholt 1, C NW SW NW 3-33n-1e. At 1653 feet, 2 feet into the Ellis-Madison, the hole filled with 31-gravity oil which pumped at the rate of 37 barrels for the first 19½ hours, and then pumped off to a rate of 16 barrels daily. The well will be acidized and may be drilled deeper to determine full possibilities of this new pay.

Elk Basin: This field, located in Park County, Wyoming, and extending into Carbon County, Montana, is still the area's leader in routine development drilling. There are 23 rotary rigs in operation, consisting of 10 drilling for Stanolind Oil and Gas Company, 7 for MacKinnie Oil and Drilling Company, and 6 for The Carter Oil Company.

In the South Elk Basin area Continental Oil Company's Goodstein 1, NE SE SW 20-57n-99w, was running 7-inch casing to 5703 feet. This will shut off newly-discovered gas totaling 15,000,000 cubic feet per day, found in the Second Frontier, Dakota and Lakota sands. This well is projected to the Tensleep sand for possible oil pay which is productive 4 miles north in Elk Basin.

Sharples Corporation has what appears to be an extension in the south end of Los Soldier field, Sweetwater County, Wyoming. In a drill stem test of the Tensleep from 5998-6036 feet, open 1 hour, 110 feet of oil-cut mud and 1250 feet of 35-gravity oil were recovered by Government 1, NW NE NW 14-26n-90w.

Church Buttes: Contractors are rigging up heavy rotary at NE SW NW 8-16n-112w, for a seismograph prospect projected to 12,000 feet to the Frontier. The test is a joint venture of Mountain Fuel Supply Company and Union Pacific Railroad Company.

Oil Mountain: The Texas Company has an oil discovery, as yet incomplete, in Natrona County, Wyoming. In cores taken from the Tensleep from 2622-2795 feet, more than 150 feet of saturation was recorded. Oil was 17-gravity. No satisfactory production test has been made and the well is being drilled on for a test of the Madison limestone.

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WESTERN CANADA

Five Companies Plan Test Of Brazeau Anticline

Three majors and 2 independents have pooled resources to test the Brazeau Anticline, a deep (10,000 feet plus) Central Alberta Foothills structure. The backers are Shell Oil of Canada, Imperial Oil Ltd., Socony-Vacuum Exploration, Ltd., Anglo-Canadian Oil Company and Home Oil Company.

The structure, scene of an unsuccessful but encouraging deep test by Home Oil in 1940, has been seismographed by the new team and, on the basis of results obtained, location has been staked for a joint well about ½-mile northeast of the old venture. The heavy duty rotary used to drill the deep Shell discovery well at Jumping Pound is now being moved to the site. Shell will do the drilling.

The five companies, through participation in Home-Brazeau Syndicate, control a total of 176,500 acres, covering the structure and the adjacent region. The well-site, in unsurveyed territory, is along the banks of Chungo Creek in the southwest quarter of 17-43-17 w5th. The acreage block extends from Twp. 42 to 47, in Ranges 16 to 21w5th.

Home Oil's Brazeau venture, abandoned in 1940 at 8728 feet, encountered two high pressure gas zones, the second of which carried a fair but noncommercial volume of 56-57 gravity naphtha. The first zone was at 6,645 feet, in the Blairmore formation. Gas pressure blew the cable tools out of the hole and, as a result, a change was made to rotary. The second gas zone came in from 8480 to 8550 feet, yielding a flush of 9-10,000,000 cubic feet of fairly wet gas daily. This zone was in the Kootenay-Fernie section. The bit faulted to Blairmore at 8550 feet.

As was the case at Jumping Pound, where early drilling showed oil and gas in upper formations, with fault cutting off the Madison limestone objective, seismograph work at Brazeau indicates a Madison uplift to the east. The new joint-drill test will seek that uplift.

Pacific Oil & Refineries' Twin River No. 3, 1sd 16 3-2-20w4th, initial Devonian test in the Twin River-Del Bonita section of the Southern Alberta Plains, has confirmed Devonian Dolomite at 5354 feet. Pin-point porosity, with oil staining, showed in core from 5377 to 5389 feet, but drill-stem test yielded only 90-foot rise of drilling mud. Coring is proceeding, with further tests to be made as porosity or oil-staining is encountered.

Shell Honors Employes

"The Ten and Over Club" of Shell Oil Company and Shell Pipe Line Corporation, Houston, held its annual banquet January 22, at which some 260 employes were present. The banquet is held yearly to honor those who have completed their tenth, fifteenth, twentieth or twenty-fifth years of service during the preceding year.

The club now has a membership of 289, including 27 on military leave. Of those present, 10 had 25 years service or more, 39 have 20 to 25 years, 102 have 15 to 20 years, and 111 have 10 to 15 years.

U. S. Exploratory Completions

ALABAMA WILDCAT

Wilcox County—Failure: Southern Nat. Gas Co.'s Fannie Stokes 1, c sw nw 32-12n-5e, abnd 4305 ft.

CALIFORNIA WILDCATS

Fresno County—Failure: Texas Co.'s Cal-Cotton, ne sw 23-16-15, Kreyenhagen 7620 ft, Green sd 8515 ft, Base Domengine Grit 8527 ft, abnd 9320 ft.

Kern County—Failure: Richfield Oil Corp.'s Old River KCL 2, nw nw 3-31-26, Stevens 8608 ft, wet 8596-8625 ft, abnd 8661 ft.

ILLINOIS WILDCATS

Franklin County — Failure: Leonard Oil's Crowe 1, nw nw nw 1-7s-3e, abnd 3197 ft.

Madison County — Failure: J. H. Barton's Blunt 1, ne ne ne 15-3n-5w, abnd 990 ft.

Marion County—Failure: C. A. Baldwin et al's Leith 1, sw sw nw 28-3n-1e, abnd 1026 ft.

Richland County—Discovery: Fulk & Cravens' Saeger 1, se se se 7-3n-9e, pump 8 bbls, McCl 3014-18 ft, td 3101 ft.

Washington County—Failure: Bennett Bros.' Baldwin 1, se sw ne 19-1s-3w, abnd 2660 ft.

Wayne County—Failure: Skelly's Hoover 1, ne nw sw 1-1n-5e, abnd 3055 ft.

INDIANA WILDCATS

Gibson County—Failure: R. D. Brown's Bingham 1, ne sw sw 16-1s-11w, abnd 4125 ft.

Knox County—Failure: Texas Co.'s Oexmann 1, sw se nw 3-1n-9w, abnd 1713 ft.

Parke County—Failure: Craig & Phillips' Rohm 1, se ne ne 15-15n-8w, abnd 1700 ft.

KANSAS WILDCATS

Barber County — Failure: Superior's Ward Estate 1, nwc sw 2-31s-15w, Arb 4632 ft, abnd 4678 ft.

Barber County—Gas Discovery: Lion's Lemon 1, se ne ne 28-30s-13w, flow 18 mln gas, perf 48 shots 4528-45 ft, td 4848 ft.

Cowley County—Failure: Adair & Huber's Jacobshagen 1, sw sw sw 6-31s-5e, Miss 2928 ft, abnd 2968 ft.

Reno County—Failure: Sterling Drlg. Co.'s Osenbaugh 1, swc 34-22s-8w, Arb 4047 ft, abnd 4080 ft.

KENTUCKY WILDCATS

Daviess County—Failure: Miller & Shiarella's Mulligan 1, 23-O-27, abnd 1412 ft.

Hancock County — Failure: Carroll Kelly's E kridge 1, 22-O-34, abnd 703 ft.

Henderson County—Failure: Sinclair Prairie's McNeely 1, 23-O-20, abnd 2700 ft.

McLean County—Failure: Vickers & Slaghter et al's Durbin 2, 3-L-27, abnd 1300 ft.

Webster County—Failure: Sinclair Prairie's Rakestraw 1, 15-M-24, abnd 3-52 ft.

NORTH LOUISIANA WILDCATS

Richland Parish—Failure: Milton J. Houston-Rogers Lacy's Duckworth Est. 1, 18-17n-10e, elev 101 ft, abnd 3531 ft.

West Carroll Parish—Failure: Arkansas Fuel Oil Co.'s Frances Briggs et al 1, 9-21n-11e, Wilcox 1600 ft, Midway 2466 ft, Gas Rock 2850 ft, Cotton Valley 2960 ft, Buckner 5610 ft, Smackover 5878 ft, abnd in salt 6937 ft.

SOUTH LOUISIANA NEW PAY TEST

Iberville Parish—Bayou des Glaise Oil Discovery: Humble's Eilberts Min. Corp. et al C-1, start swc sect 77 go 1333 alg wl th 13 ely at ra to lcn in 77-8s-8e, perf 10,237-264 ft, flow 321 bbls 36.3-gr oil, 0.1% wtr, 10/64-in, tp 1575 lbs, td 10,581 ft.

MICHIGAN WILDCATS

Montcalm County—Cato Field Discovery: Gordon Oil Co.'s Paris 1, se nw nw 6-12n-8w, Cato Township, elev 967 ft, Stray sand 1276 ft, Traverse 2964 ft, Dundee 3429 ft, Monroe 3540 ft, perf 3542-45 ft, so&g, 200 gals acid, flow 10 bbls oil, 20 bbls wtr, td 3604 ft, pb 3548 ft.

MICHIGAN OUTPOST

Arenac County—North Adams Failure: Don Rayburn's State A-1, sw ne ne 11-19n-3e, 1 mi n prod, Dundee 2923 ft, abnd 3030 ft.

MISSISSIPPI WILDCAT

Covington County—Failure: Mt. Vernon Car Mfg. Co.'s Fee 1, c ne ne 17-9n-16w, elev 340 ft, Wilcox 2602 ft, Midway 5700 ft, Clayton 6268 ft, Selma 6316 ft, Austin 7580 ft, Eutaw 7760 ft, Tuscaloosa 8100 ft, Marine Shale 9007 ft, L. Tuscaloosa 9199 ft, Massive 9483 ft, Red Beds 9528 ft, abnd 9648 ft.

NEW MEXICO WILDCATS

Eddy County—Failure: W. R. MacKenzie et al's Cook & Ironsides 1, sw se nw 8-20s-29e, elev 3275 ft, anhydrite 435 ft, salt 507-835 ft, abnd 1204 ft.

Lea County — Failure: Texas Co.'s State 1-A-G, c sw nw 29-16s-34e, elev 4137 ft, Yates 2810 ft, brown lime 3882 ft, San Andres 4480 ft, chert 5261 ft, Glorietta 5990 ft, abnd 7520 ft.

Rio Arriba County—Failure: Travis Oil Co.'s Tierra-Amarillo 1, ne sw nw 21-31n-2e, abnd 705 ft.

WEST TEXAS WILDCATS

Upton County—Failure: Magnolia's American Republics Corp. 1, c nw nw T&P Ry. 8, blk 40, T-5-S, elev 2850 ft, abnd 8507 ft.

WEST TEXAS OUTPOSTS

Andrews County — Union Field: Union of Cal.'s Biles 6, c se ne PSL 9, blk A-31, 1¼ mi n extension, elev 3405 ft, anhydrite 1720 ft, salt 1780-2850 ft, San Andres 4480 ft, San Angelo (Glorietta) 5670 ft, Clear Fork 6140 ft, Tubb sand 6650 ft, pump 50 bbls 41.8-gr, 24,000 gals acid Clear Fork broken pay 6950-7460 ft.

Cochran County—Slaughter Field: Honolulu Oil Corp.'s R. M. Hudson 1-9, 700 ft nsl 1860 ft ewl PSL sec 9, blk P, 3¼ mi sw of field, elev 3709 ft, anhydrite 2411 ft, brown lime 3990 ft, pump 111 bbls, 8000 gals acid San Andres broken pay 5070-5120 ft, td 5153 ft, pb 5120 ft.

WEST CENTRAL TEXAS WILDCATS

Jones County—Failures: W. D. Brookover & H. R. Burden's Brinkley 1, ne sw sw T&P Ry. Co. 11, blk 15, abnd 2615 ft.

R. H. Roark-L. F. Hooker's McDonald 1, 1176 ft snl 330 ft ewl labor 75, lge 125, DeWitt CSL sur, elev 1771 ft, abnd 2525 ft.

SOUTHWEST TEXAS WILDCATS

Jim Hogg County — Failures: Sun's Well Bros. 16, 4000 e of interior cor Lanoria de San Domingo Gr, 25,733-ac lse, abnd 5705 ft.

Texon Roy. Co. et al's Hector Vela 1, 330 fr n&el sur 108 1107-ac lse, 18 mi sw Hebbronville, elev 744 ft, abnd 2850 ft.

Starr County—Oil Discovery: George Irving's M. M. Garcia B-1, 330 fr e&sl blk 12 sh B-7 porc 91 40-ac lse 2000 n of Boyle fld, sand 4080 ft, perf 4121-27 ft with 36 shots, flow 120 bbls, 9/64-in, td 4264 ft.

Webb County—Failure: Dulup Oil Co.'s Bruni 6, 330 fr n&el blk 74 Brown subdvn, Albercas Gr, 660 e of well No. 5, elev 835 ft, abnd 1670 ft.

Zapata County — Failure: A. M. Lacey's Carlso Vela et al 1, 330 fr nwl 330 fr swl 2568-ac lse porc 21, ssg 2280-2310 ft, sso 2414-40 ft, abnd 5406 ft.

LOWER TEXAS COAST WILDCAT

Victoria County—Failure: Sohio-Wiggins & McFerron s Albert J. Albrecht 1, 660 fr nw& swl 386-ac lse, Cecelia de la Garza sur, 15 mi wly fr Victoria, abnd 4600 ft.

TEXAS GULF COAST WILDCATS

Wharton County — Gas Discoveries: Salt Dome Oil Corp.'s Joe Vitera 1, 1179 fr nl 1320 fr wl Henry Mills sur A-270 and of blk 1 366-ac lse, 3 mi nw of Louise, perf 5240-44 ft, flow gas, no gge, shut in, td 5591 ft.

Texas Co.'s H. R. Matzke 1, start intersection T&NO RR with wl sect 26 go 3150 ne alg s row of RR th 330 sely to lcn 1814 fr sl n½ sect 26, perf 23 shots 5779-84 ft, flow 48.5 mln gas open, shut in, tp on ¼-in 2130 lbs, td 6345 ft.

TEXAS GULF COAST OUTPOST

Wharton County — Boling Failure: Dick Schwab's Floyd Est. 1, 330 fr m/nly/nel 269.7 fr nwl 198.6-ac lse, 330 sw of swl of Phillips 41.37-ac part of Floyd 240-ac lse, 3/5 mi sw Boling, abnd 8007 ft.

EAST TEXAS WILDCATS

Anderson County—Failure: J. B. Daniels et al's Handorf 1, 467 ft nsl 467 ft w of m/w/el of 260-ac tr, or 3350 ft ewl 950 ft n of m/s/sl Joseph Humphrey sur, 5 mi n Palestine, elev 482 ft, Pecan 3827-4017 ft, Austin 4911-5197 ft, Sub-Clarksville 5257-87 ft, Woodbine series 5430 ft, abnd 5518 ft.

Wood County—Failure: Delta Drl. Co.-Bobby Manziel's Mosley 1, 1790 ft ewl 2200 ft nsl Seth W. Mitchell sur, A-386, elev 460 ft, Pecan 2900-3150 ft, Vaginulina 3980 ft, base Austin 4800 ft, oil (heavy) saturation in Sub-Clarksville 4810-50, 5130-80 ft, Woodbine 5265 ft, abnd 6015 ft.

NORTH TEXAS WILDCATS

Archer County—Oil Discovery: Chas. E. Morrison-Maguire Industries' W. M. McGregor 4, 197 ft snl 450 ft wel of w½ subdvn 7, Brazos CSL sur A-18, 3¼ mi se prod, pump 9 bbls, sand 861-72 ft.

Cooke County—Failures: Al G. Hill et al's Atcheson 1, 330 ft out nec W. D. Easley sur A-1481, elev 965 ft, schist 3044 ft, abnd 3084 ft.

S. D. Johnson et al's Zipperer-Wiesman 1, 330 ft out sec blk 24, Geo. Ivy sur A-516, elev 1069 ft, top Ellenburger 1921 ft, abnd 2016 ft.

G. E. Kadane & Sons' Coursey ¼ 330 ft ewl 330 ft fr sw of e 107.6-ac W. F. Shaw sur A-1307, elev 1052 ft, schist 2950 ft, abnd 2960 ft.

G. E. Kadane & Sons' Hacher 1, 1114 ft snl 330 ft wel D. W. Donnell sur A-1477, elev 1048 ft, abnd 4053 ft.

Jack County—Failure: A. R. Dillard et al's

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OIL AND GAS FIELD MAP
of
NORTH LOUISIANA, MISSISSIPPI, SOUTH ARKANSAS, EAST TEXAS AND WEST ALABAMA

Showing county, county seat, oil, gas and condensate fields with their names; discovery date, gravity of production and name, age and producing formation; also the size and ownership of all oil and gas trunk lines traversing this area. Hand colored, green, red, and yellow.

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Scale 1:500,000-42x70-Paper $12.50; Linen $20.00. Scale 1"-11.5 Mi.-28x46-Linen $15.00.

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■ OIL AND GAS FIELD MAP: Texas District Four, showing county, fields, pipelines, a tabulation showing discovery dates, gravity, depth, and insert map showing Railroad Commission Districts. Lithographed, red, green, black, 17 x 22, Scale 1"—11 Miles. $1.00 folded; $1.25 rolled. ALSO $7.50 size, 24 x 36, 1:500,000 scale, Blue Line Linen, hand colored, yellow indicating condensate. Commercial Drafting Service, Box 6277, Houston 6, Texas.

■ FOR SALE: 300 Tobey A inverted domestic gas meters. THE ACME FOUNDRY & MACHINE COMPANY, Coffeyville, Kansas. Phone LD-7040.

FOR SALE

■ FOR SALE: Star "30" heavy duty portable machine. Also standard cable outfit, rig irons, boilers, engines, tools. Everything in cable drilling equipment. S. W. Pressey, Pueblo, Colorado.

■ FOR SALE: 3 Cameron Centrifugal Pumps, Type HST-6, 27,000 Barrel Capacity 800 lb. Pressure, 1800 rpm. Complete with bed plates for handling Petroleum Products. In good condition. Utility & Industrial Supply Co., Jackson, Michigan.

SITUATION WANTED

■ Petroleum Engineer—Have 19 years practical oil field experience, last five as petroleum engineer. Desire connection with aggressive independent operator. Age 40. Available. Address: Box 50, c/o The Oil Weekly, Houston, Texas.

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OIL AND GAS LEASE

WAR FOOD ADMINISTRATION, Farm Security Administration, Dallas, Texas. Sealed bids in duplicate will be received in this office until 3:00 o'clock P.M. (cwt), February 26, 1945, and then publicly opened offering bonus for operating rights in connection with oil and gas leases on lands located in Harrison and Panola Counties, Texas, being a part of the Sabine Farms Project, Marshall, Texas. The project area of approximately 9,592 acres has been divided into six subdivisions for leasing purposes. An official subdivision plat of Sabine Farms Project is on file in the County Clerk's office of Harrison County, Texas. The United States owns an undivided three fourths interest in the mineral rights in four tracts and an undivided three eighths interest in the mineral rights in two tracts with the exception of specific reservations applicable to three tracts as set forth in the legal description included in the invitation. Further information regarding mineral rights and identification of the tracts to be leased may be obtained from a plat of the Sabine Farms Project entitled "General Layout Map" which will be furnished interested parties upon request This plat is available for inspection in the office of the Project Manager, Sabine Farms Project, Marshall, Texas, and in the Regional Office of this Administration, Dallas, Texas. Award of lease(s) will be made to bidders who can show sufficient experience and financial resources and prove citizenship. Interested parties may obtain bid documents and operating regulations from the office of the Regional Business Manager, Farm Security Administration, Parry Avenue at Commerce, Dallas, Texas.

Marley 1, 330 ft out sec ne¼ W.C. Ry. sec 4, A-984, Palo Pinto 1125 ft, abnd 3430 ft.

Montague County—Failure: Sinclair Prairie's Foster 1, 660 ft nsl 496 ft ewl blk 179, J. H. Belcher subdvn of Jose Olibarri sur A-579, elev 941 ft, Bend 5926 ft, Barnett 6313 ft, abnd 6345 ft.

Montague County—Oil Discovery: Texas Co.'s L. A. Hutson 1, 660 ft out sec of G. W. Fletcher sur A-280, 1 mi e by n of Spencer 2800-foot pool, elev 1020 ft, pump 78 bbls oil, 32½ bbls wtr, Strawn perf 1890-1895 ft, td 4185 ft in granite.

NORTH TEXAS NEW PAY TEST

Young County—Burns-Larimore Pool Strawn Discovery: L. T. Burns et al's Larimore 2-A, 500 ft snl 425 ft ewl of e 200-ac of TE&L Co. sec 150, twin lcn to discovery in Mississippi at 4897-4927 ft, pump 75 bbls oil, 35 bbls wtr, Strawn 3319-24 ft.

TEXAS PANHANDLE WILDCAT

Donley County — Failure: Stanolind-Texas Co.'s Lewis-Fields 1, c sw ne D&P Ry. Co. 81, blk E, 14½ mi n Hedley, elev 2538 ft, Blaine 365 ft, abnd in granite 4092 ft.

WESTERN CANADA WILDCAT

South Alberta Plains — Jenner: I. W. C. Solloway's Goyette-Solloway 1, lsd 9 30-20-7w4th, abnd 4500 ft, 581 ft below Devonian Dolomite contact.

☆

L. D. COADY, former general manager of crude oil purchasing for The Atlantic Refining Company with headquarters at Philadelphia, has moved to Dallas, where he has been elected vice president and chairman of the executive committee of the American Liberty Oil Company, American Liberty Pipe Line Company, Southport Petroleum Company of Delaware, Talco Asphalt & Refining Company and other oil concerns.

HELP WANTED

MECHANICAL ENGINEER
Leading manufacturer of drilling and production tools, located in Southern California, has opening for man, 25-35, pref. M.E. degree, should have had some experience in design and/or oil field operation. We sincerely believe this to be a worthwhile opportunity for the right man. Salary will be in line with past record and ability. Write fully giving outline of personal data and experience for past ten years. Enclose small photo if possible. Address: Box 51, c/o The Oil Weekly, Houston, Texas.

■ Wanted by a consulting geophysical organization. Petroleum Engineers with Hayward Mudlogging experience or its equivalent. Immediate openings in Venezuela. Excellent opportunity for advancement to managerial positions throughout the world. Address: Box 36, c/o The Oil Weekly, Houston, Texas.

NOTICES

■ Experienced Independent Operator desires to contact ample capital for drilling meritorious blocks. Details upon request. Box 111, c/o The Oil Weekly, Houston 1, Texas.

■ CAPITAL SEEKERS—Interested in raising $25,000 or more should write to Amster Leonard, Fox Bldg., Detroit 1, Michigan.

WANTED TO BUY

■ WANTED REPAIRABLE 50 to 350 3½ inch Hydril Twin Pins to fit 3½ inch O.D. internal flush external upset drill pipe. Standard Oilfield Supply Company, Post Office Box 863, Phone P. 8271, L. D. 2195, Houston, Texas.

WANTED TO BUY

Three to four small double reduction pumping units Oilwell five or ten or similar; also 2400 ft. seven-inch O.D. casing, good condition. ELLMAG OIL CORPORATION, Luling, Texas.

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Regular classified advertisements for this special section, set in type this size without border, take flat-rate of 7 cents per word for the first insertion and 5 cents per word for each subsequent insertion of same copy. Display advertisements for this section, set in suitably larger type with ruled border, are $5.00 per inch for the first insertion and $4.00 per inch for subsequent insertions. Remittance must accompany copy which should be sent to:

Trading Post Section, The Oil Weekly
P. O. Box 2608 Houston 1, Texas

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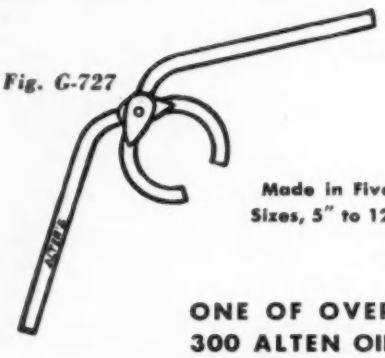
Fig. G-727



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P-10

United States Wildcat Starts

CALIFORNIA

Kern County: Sunset Oil Co.'s Sunset A-1, nw nw 6-31-22, gas test, McKittrick area, ru.

Western Gulf's Bloemer 1, ne se 3-30-28, Mountain View area, lcn.

Orange County: W. G. Krieger et al's Miles 1, se se 14-5-11, Westminster area, lcn.

San Joaquin County: Honolulu Oil Corp's Brack Comm. 1, ne se 29-3-6, gas test, Lodi area, lcn.

Ventura County: MacDonald, Burns and Norris' Culbertson 4, ne ne 12-1-22, Oxnard area, lcn.

ILLINOIS

Clay County: Magnolia's Cammon 1, ne se ne 16-4n-7e, lcn.

Jefferson County: Oil Management's Hall 1, nw sw ne 29-1s-1e, lcn.

Madison County: St. Clair Oil Dev. Corp.'s Beste 1, ne ne sw 11-3n-7w, lcn.

Marion County: B. W. Quick et al's Henning 1, se ne ne 31-3n-1e, dr.

Richland County: Pure's Hasler 1-A, ne se ne 1-3n-8e, lcn.

Russell R. Murray's Kuhtz 1, ne ne ne 21-3n-10e, lcn.

INDIANA

Dubois County: Carl Michel's Frick 1, ne se se 21-2s-5w, lcn.

Greene County: George Morgan's Jefferies 1, sw sw nw 16-6n-6w, lcn.

Parke County: Craig & Phillips' Hampton 1, nw sw se 10-15n-8w, lcn.

Posey County: Farm Bureau et al's Gibson 1, ne ne nw 27-4s-12w, lcn.

KANSAS

Pratt County: Kingwood Oil Co.'s Hoskinson 1, se se se 3-26s-12w, lcn.

Rush County: B&R Drlg. Co. et al's Brack 1, se se nw 4-17s-17w, rur.

Russell County: Co-op's Bear 1, sw se ne 13-12s-14w, lcn.

Premier Drlg. Co.'s Hupper 1, se se ne 7-15s-12w, dr.

Sedgwick County: Beech Aircraft's Gehring 1, ne nw sw 16-28s-2e, mim.

Stanton County: Stanolind's C C & P 1, 31-28s-39w, rur.

KENTUCKY

Daviess County: Miller & Shiarella's Mulligan 1, 23-O-27, lcn.

Hancock County: Carroll Kelly's Eskridge 1, 22-O-34, lcn.

Union County: Bert Conner et al's Clements 1, 20-M-19, lcn.

NORTH LOUISIANA

Bossier Parish: Barnsdall-Sohio's Welori Lbr. Co. 1, c se nw 20-20m-12w, lcn Cotton Valley test.

Natchitoches Parish: E. P. Wingfield-G. A. Lindsay's Sullivan 1, nw nw 6-13n-7w, lcn 5500-ft test.

SOUTH LOUISIANA

Lafourche Parish: C. I. Production Co.'s Octave Aucoin 1, 660 fr s&wl of 56-17s-19e, 2 mi w nw of Lake Long fld, lcn 10,500-ft test.

MICHIGAN

Mecosta County: C. W. Collin's Fountain 1, ne sw sw 4-13n-7w, dr.

Ogemaw County: Arenac O&G Co.'s State 1, w½ sw 15-24n-4e, rig.

MISSISSIPPI

Clark County: M. T. McClellan's Charles E. Walters 1, c se se 4-10n-9w, lcn.

Tishomingo County: Levan & Akers' J. D. Whitaker 1, c se se 22-3s-10e, lcn Paleozoic test.

Webster County: P. M. Barton-Joe E. Skelton's J. E. Skelton 1, nec ne¼ 6-21n-11e, lcn.

Wilkinson County: Rogers Lacy's Harriete W. Miles et al 1, c nw se 35-1n-1w, lcn 12,500-ft test, mi.

MISSOURI

Platte County: Wilson et al's Kincaid 1, sw se se 8-54n-33w, dr.

NEW MEXICO

Union County: Herndon Drl. Co. et al's Mack 1, nw nw nw 25-27n-36e, 10 mi ne Clayton, lcn 6000-ft Pennsylvanian test.

WEST TEXAS

Dawson County: Magnolia's J. P. Cole 1, Welch fld new pay test, c ne nw E.L. Ry. Co. 48, blk M, lcn 6000-ft Clear Fork test.

Ector County: Sinclair Prairie's J. M. Williamson 1, c se sw T&P Ry. 40, blk 45, T-1-N, 3 mi n by w of TXL deep discovery, lcn 10,500-ft Ellenburger test.

Glasscock County: I. Weiner & J. E. Petty's W. P. Edwards 1, 1200 ft out sec T&P Ry. 11, blk 34, T-2-S, lcn 1200-ft test.

Presidio County: Stanolind's Presidio Trust 1, 1980 ft nsl 1100 ft wel D&P Ry. Co. 99, blk 3, 14 mi sw Valentine, lcn 7500-ft rotary Pennsylvanian test.

WEST CENTRAL TEXAS

Jones County: Cascade Pet. Co.'s Mrs. Daisy Thompson 1, 330 ft out sec of 40-ac tr on east side S.P. Ry. 18, blk 2, 1 mi se of Flippen 2388-ft well, lcn for Swastika test.

Mills County: N. M. Miller et al's Geo. Niemann 1, 330 ft snl 1612 ft wel of 145-ac tr, or 5313 ft ewl 5764 ft nsl Jas. A. Winn sur, lcn 3500-ft Ellenburger cable test.

SOUTHWEST TEXAS

Duval County: Tom Graham's Juana Rch Co. 1 (owdd), 2350 se of nwl sur 571, 125 nw of nwc of San Diego de Ariba Gr, elev 509 ft, to deepen to 4500 ft.

J. W. Kunetka's W. A. Tinney 1, 615 fr nl 1472 fr wl 116.3-ac lse, A. J. Bryant sect 8, lcn 700-ft cable tool test.

Smith & Story's John T. Dinn 1, 990 n 330 w of swc sect 200 120-ac lse, mir.

Starr County: Sun's M. S. de Flores et al 1, (owdd), 467 fr e&nl tr 3 porc 40, Juris of Reynosa Gr, 138-ac lse, deepening to 8500 ft, coring 5822 ft.

Webb County: Dulup's Bruni 7, 1320 fr el 330 fr nl blk 74 Brown subdvn Albercas Gr, 640-ac lse, 12 mi s of Mirando City 330 e of well No. 6, lcn 1700-ft test.

LOWER TEXAS COAST

Bee County: Humble's Josephine Chestnutt 1, 5622 fr Miguel de los Santos Gr 859 fr nwl 1000-ac lse, 5500 fr nl lse, lcn 5000-ft test.

Jackson County: Roxie Wright's Ed Asbeck 1, 330 fr n&wl 40-ac lse 3 mi ne Edna, lcn 6000-ft test.

Lasalle County: Jess McNeil's Fee 1, 350 fr n&el 40-ac lse, Bland & Nelson subdvn sect 16 6 mi n of Fowlerton, lcn 5500-ft test.

Refugio County: Dick Schwab's Jas. F. Welder Heirs 1, 330 fr nel 407.4 fr el 330 fr sl 80-ac lse, CEPI&M sur, 5 mi ne of Greta, lcn 6500-ft test.

San Patricio County: H. H. Howell's C. A. Maedgen 1, 467 fr nw&nel 204-ac lse, Mathis Rch subdvn blk 4, lcn 5000-ft test.

Republic Nat. Gas Co.'s J. B. Hardwick 1, 330 fr swl 120 fr sel blk 48 Welder & Odem subdvn 465-ac lse, lcn 5600-ft test.

Victoria County: James Stewart & Co.'s Mrs. Grace Gaffney 1, 467 fr wl 11,840 fr nl tr, Juan Flores sur A-29 1½ mi n San Antonio River 3 mi se Terrell fld, testing 5012-20 ft.

Willacy County: Texas Co.'s Yturria Land & Livestock Co. 5, 660 fr sl sh 3 15,900 fr el lse 8058 sw of well No. 1, Jose Narciso Cabazon Gr, dr 2629 ft.

TEXAS GULF COAST

Brazoria County: C. H. Alexander's J. J. Settegast 1, 330 fr nw&swl 50-ac lse and Warren D. C. Hull sur A-70, 3 mi se Pearland, lcn 6000-ft test.

Matagorda County: Union of Calif.'s Emma Larsen Graddy 1, 3400 fr nl 5360 fr el 722.8-ac lse, Daniel Etherton Lge, 3½ mi w of Markham, elev 47 ft, lcn 10,000-ft test.

San Jacinto County: Magnolia et al's Hinchcliff-Sims 1, 1250 fr nl J. W. Lutz sur 90 660 e of ely/wl 1288-ac lse and sur, lcn 12,000-ft test.

Tyler County: Humble's Denman-Kountze et al B-2, 494 n ne fr nec P. B. Wilcox tr 1230 nw of sel of 3009-ac lse and GB&N sur A-343, lcn 9000-ft test.

NORTH TEXAS

Cooke County: Allied Pipe Line Co.'s R. E. Solomon 1, 330 ft nsl 2585 ft ewl of John Musick sur A-780, dr 1410 ft.

Geo. W. Graham et al's W. M. Sicking 1, 2300 ft ewl 800 ft nsl of 255-ac tr, Melville Langham sur A-564, lcn 2000-ft rotary test.

WYOMING

Big Horn County: Continental's Prescott 1, se se se 9-55n-96w, South Byron area, woc at 313 ft.

Taylor Oil Co.'s Govt. 1, c sw ne 31-56n-96w, South Byron area, rur.

Natrona County: Stanolind's Unit 1, nw se sw 10-35n-85w, Boone Dome, dr 310 ft.

Kerlyn's Govt. 1, ne se ne 23-35n-79w, Midway Dome, dr 782 ft.

Uinta County: Mountain Fuel Supply Co.'s Unit 1, ne sw nw 8-16n-112w, Church Butte area, rur.

WESTERN CANADA

Alberta Foothills Belt — Brazeau: Home-Brazeau Syndicate's No. 1, sw¼ 17-43-17w5th, mir.

☆

MARK KLEEDEN, 53, oil operator and former president of Black Gold Petroleum Company, died in Oklahoma City, January 16. He had been retired since 1940 on account of poor health.

Squeaks from the Bull Wheel

When Two Agree

He: "I'm not feeling myself tonight."
She: "You're telling me!"

Unwilling Negative

An inebriated sailor took his girl friend for a ride on a rainy night. For hours all she would do was shake her head. It wasn't until he pulled up before her home that he discovered her nose was caught in the windshield wiper.

No Secret, Then

"Are you secretly married to her?"
"No—I think she knows it."

His Choice

"I want to marry your daughter, sir."
"Have you seen my wife yet?"
"Yes, sir, but I prefer your daughter."

Journey for Margaret

"Did that sailor get fresh with you last night?"

"Mother, do you think he came back across the Pacific in a submarine and stood up in a crowded train all the way across the continent just to listen to my radio?"

The Way of a Maid

Kissing a girl is like opening a bottle of olives—the first may come hard, but it's a cinch to get the rest.

Small Difference

Guy: "When you stay after class with the professor, what do you do—study history?"

Gal: "Nope, make it."

Voice of Experience

"I was just getting fond of him when he got fresh and spoiled it."

"Isn't it just awful how fast a man can undo everything?"

Ba——Looie!

The Howitzer's wrath
Is tender and muted
Compared to a Looey
Who has not been saluted.

Life Is Like That

"Your leg is swollen," admitted the doctor, "but I wouldn't worry about it."

"Well, if your leg was swollen, I wouldn't worry about it either."

Good Prospect

"Here's your engagement ring. I love another."

"Who is he?"

"You're not going to kill him?"

"Heck, no. I'm gonna sell him the ring."

Make It Sherry

Slowly, her eyes glowing with a soft, mysterious inner light, the beautiful girl raised the glass on high, exulting: "Sherry wine to me is nectar of the gods, the very elixir of life! When I imbibe its amber delights, my sould begins to throb and burn. The music of a thousand muted violins whisper softly in my ear and I am transported to a make believe world of magic. On the other hand—Port makes me burp."

Delayed Stinger

Admiral Sir Andrew Cunningham was aboard his flagship in a Mediterranean port when a cruiser made a sloppy job of tying up to her berth. The cruiser's captain, dreading the message he knew would come from his commander, was relieved, if puzzled, when it was delivered. It consisted of one word: "Good."

Fifteen minutes later the captain was interrupted with a supplement reading: "To previous message please add the word: 'God.'"

This Curious World

He mumbled a few words in church—and he was marriel. He mumbled a few words in his sleep—and he was divorced.

A man who wouldn't lie to a woman has little consideration for her feelings.

She was only an optometrist's daughter, but give her two glasses and she'd make a spectacle.

His parents spent 21 years making a man of him. A girl needed only ten minutes to make a monkey of him.

Anyone who dies from drinking varnish is guaranteed of a fine finish.

As You Like It

"Darling, swear that you love me."
"Dammit! I do."

PAGES 3079 THRU 3098
IN THE 1943-44
COMPOSITE CATALOG

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Long Distance 267, Box 132, Houston, Tex.

THE FORT WORTH LABORATORIES
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Notes for the Equipment Buyer and User

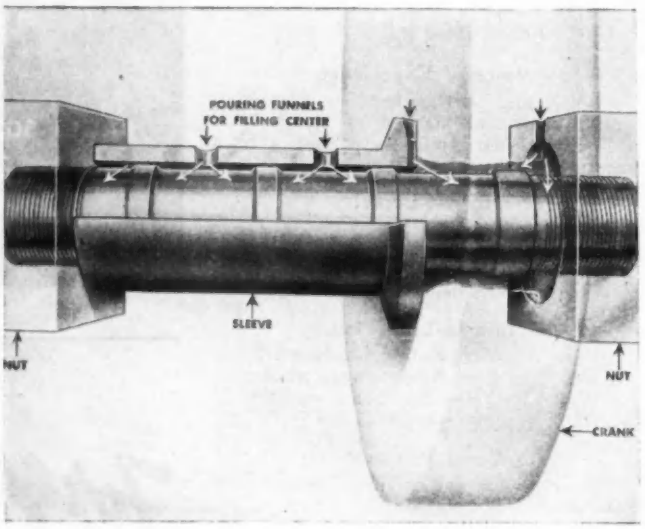
Sleeve Flange Crank Pin

GEORGE H. STODDARD

George H. Stoddard, Richfield Building, Los Angeles 13, has perfected a rugged replacement crank pin for pumping oil wells, in both emergency and permanent use.

Known as the Heaston Steel Flange Crank Pin, this pin makes it possible to renew crank or wrist pins without shutting down the well, irrespective of how badly broken the hole in the crank appears to be.

The pin consists of a special grooved pin, flanged sleeve and two nuts. No experience is needed to install it. The worn-out pin is removed and the new pin inserted in the crank. The sleeve is then slipped over the pin and the nuts screwed on. A quick preheating job, with filler metal poured into the area between the sleeve and crank pin completes the operation. This simple procedure is said to make rigid installation that will outlast the original pin.



Heaston Sleeve Flange Crank Pin

Oil Well Supply Appoints London Office Manager

Oil Well Supply Company, subsidiary of United States Steel Corporation, Dallas, announces appointment of C. T. Longcroft as manager of the London, England, office. He was formerly manager of sales in London.

Ashley Carter, former manager of the London office, has retired after 31 years of service. Carter has been prominent in petroleum circles for many years and is now vice president and honorary secretary of the Institute of Petroleum.

Powder Booklet Published

Hercules Powder Company, Wilmington, Delaware, has issued a new booklet listing chemicals, industrial explosives and about 50 industries which they serve.

In a manner designed for easy reference, the products are indexed according to various industries in which they are used and according to chemical families. Chemicals in the cellulose family, rosins and modifications, rosin esters and synthetic esters, terpene solvents and chemicals, explosives, and blasting supplies are discussed

Tubing Booklet Issued

The Formed Steel Tube Institute, Cleveland, Ohio, has issued a booklet, "Better Products with Electric Welded Tubing," to try to bring to design engineers a new concept of tubing. Specifications are included for various tubing applications.

U. S. Steel Plans Program Of Improvement at Gary

United States Steel Corporation has announced a $50,000,000 improvement program for the corporation's Gary, Indiana, mills.

In making the announcement, Irving S. Olds, chairman of the board, praised the collective efforts of pioneers in iron and steel who under free enterprise "have brought forth in this nation the mightiest and most modern and productive steel mills in the world." He pointed out that the United States could not have aggressively carried on a global war without such a national asset.

Modernization of the Gary mills to keep pace with future demands of the automotive industry will be undertaken as soon after the war as conditions will permit, Olds reported.

Color Film Available

Aeroquip Corporation, Jackson, Michigan, has a sound and color film, "Saving Hours for Victory," available for showings. This 16 millimeter film provides actual field and ship demonstrations of the quick-detachable features and replacement operations on the company's self-sealing couplings and flexible hose lines and fittings.

Prints of the film are available to maintenance and service organizations. Running time, 10 minutes.

Oil Sands Study

The Division of Documents, Department of Property and Supplies, 10th and Market Streets, Harrisburg, Pennsylvania, is offering "Oil-Bearing Sands in Southwestern Pennsylvania," a study by Matteson and Busch. Price is $1.50 per copy.

R. E. Fritsch Named Head Of Tube Turns Company

R. E. Fritsch has been elected president of Tube Turns, Incorporated, an affiliate of The Girdler Corporation, Louisville, Kentucky.

R. E. Fritsch

An associate of Tube Turns since the company's organization, Fritsch will continue as vice president and a member of the board of directors of Girdler.

George O. Boomer has been named president of Girdler, succeeding Walter H. Girdler, Sr., who died January 7. Boomer will also remain as vice president and a member of the board of directors of Tube Turns. He has been a member of the board since the corporation was founded, and executive vice president since 1938.

Happy Company Observes Its 25th Anniversary

The Happy Company of Tulsa, which in 1929 inaugurated the use of endless belts accepted by the oil industry as standard and later adopted by the API, celebrated its 25th anniversary in January.

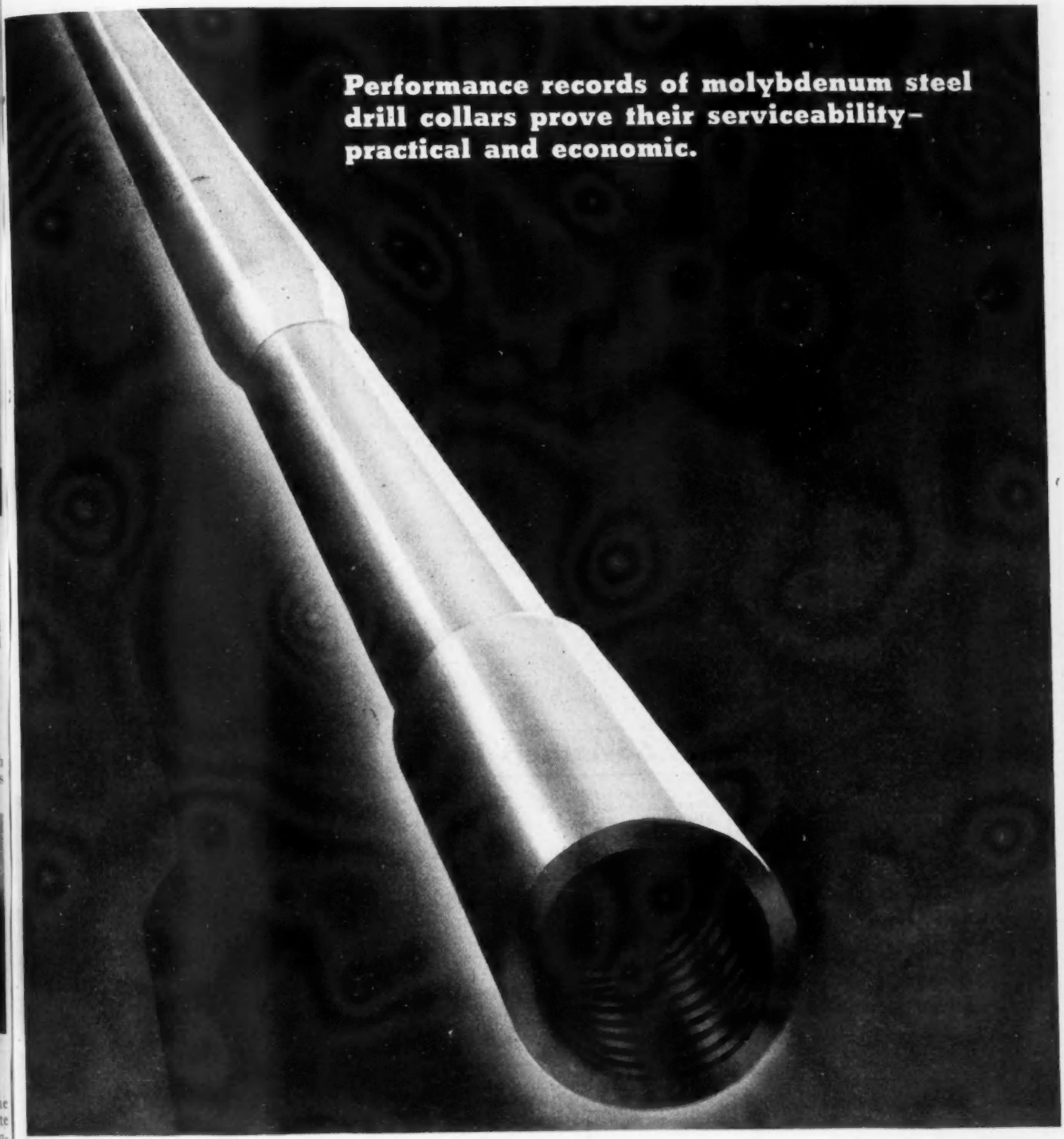
P. E. Mahaffey

The company was organized in January, 1920, by Paul Mahaffey who has continued as president. Leo King and Roy Lindley, vice president and secretary-treasurer, respectively, have been with the organization since 1924.

Organized under the name of the Happy Belting Company, its corporate name was changed to The Happy Company on January 1, 1942. Besides its original line the company in 1937 entered into the manufacture of chain driven pumping units and also entered into the sales and promotion of engine jacket cooling through the medium of radiator type cooling for engines. This phase has been enlarged to include not only cooling engine jacket water, but also cooling oil natural gas and hydrocarbons.

Infilco Honored

Infilco Incorporated, Chicago, Illinois, has been awarded the second White Star to be added to the Army-Navy E flag for meritorious production services in the war effort. The E award was made in September, 1943, and the first White Star added in May, 1944.



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See 1944 Composite Catalog Pages 2193 to 2212

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ORBIT VALVE COMPANY

TULSA, OKLAHOMA

Union Oil Firm Acquires Stock In Airplane Supply

Union Oil Company of California is closing a transaction with Airplane Manufacturing and Supply Company whereby Union will take a substantial position in the aircraft company's affairs. Airplane Manufacturing and Supply Company is engaged in the business of overhauling and rebuilding airplanes and airplane engines. It also handles and distributes instruments, engine parts and other accessories. Union will acquire 128,934 authorized but unissued shares of Aircraft Manufacturing stock. This would be slightly more than 20 percent of the total stock authorized (500,000 shares).

Foam Applicator Folder

American-LaFrance-Foamite Corporation, Elmira, New York, has issued an illustrated folder describing the various types of foam applicator made available by the government release of aluminum, for some time unprocurable for this purpose due to war conditions.

Manager Named

The Houston, Texas, branch of E. H. Edwards Company, announces appointment of J. T. Cropper as warehouse manager.

Dallas Plant Moved

Perry Equipment Company has moved its plant and offices from 934 North Lancaster to 1710-1716 Kelley Avenue, Dallas 1, Texas.

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An A.A.P.G. Publication!

TECTONIC MAP of the UNITED STATES 1944

Prepared under the Direction of the Committee on Tectonics, Division of Geology and Geography, National Research Council.

Chester R. Longwell, Chairman, Philip B. King, Vice-Chairman.

Charles H. Behre, Walter H. Bucher, Eugene Callaghan, D. F. Hewett, G. Marshall Kay, Eleanora B. Knopf, A. I. Levorsen, T. S. Lovering, George R. Mansfield, Watson H. Monroe, J. T. Pardee, Ralph D. Reed, George W. Stose, W. T. Thom, Jr., A. C. Waters, Eldred D. Wilson, A. O. Woodford.

A NEW GEOLOGIC MAP OF THE UNITED STATES AND ADJACENT PARTS OF CANADA AND MEXICO

Geologic structure, as evidenced and interpreted by a combination of outcropping areas, bedrock, surface disturbance, and subsurface deformation, is indicated by colors, symbols, contours, and descriptive explanation. Igneous, metamorphic, and selected areas of sedimentary rock are mapped. Salt domes, crypto-volcanic disturbances, and submarine contours are shown. The base map shows state boundaries, rivers, a pattern of cities, and 1-degree lines of latitude and longitude.

The scale is 1:2,500,000, or 1 inch equals 40 miles. Printed in 7 colors, on 2 sheets, each about 40 x 50 inches. Full map size is about 80 x 50 inches.

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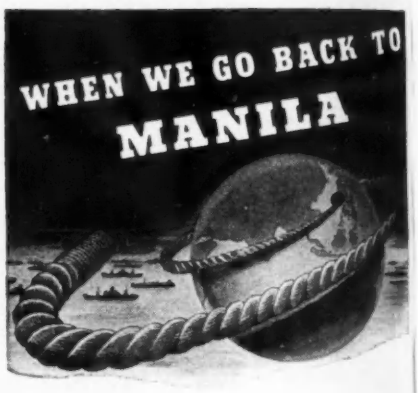

Victories in the Philippines herald the return of manila hemp, but—it will be some time after complete military reconquest that sufficient quantities of manila hemp will be available to handle all requirements.

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